A Clinical Lecture
ON
CARCINOMATOUS STRICTURE OF THE DUODENUM.

Delivered at St. George's Hospital on March 11th, 1901,

BY H. D. ROLLESTON, M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO, AND LECTURER ON PATHOLOGY AT, ST. GEORGE'S HOSPITAL.

GENTLEMEN,—A plumber, aged 50 years, was admitted to the hospital on Nov. 29th, 1900, with weakness, anæmia, vomiting, and abdominal pain. His past history showed that he had been healthy until two years ago, when he began to suffer from pain in the epigastrium immediately after food; this pain had continued on and off since. In July and August, 1900, he was laid up with vomiting, and again on Nov. 8th. During the last year he had lost weight and had grown paler, and had suffered from constipation. He had had no previous illnesses, there was no reason to think that he had had syphilis, and he had taken beer moderately. The patient was big-boned, spare, and anæmic, and presented practically no objective signs of disease in the chest or abdomen. The tongue was moist and slightly furred, the teeth were bad, but there was no blue line on the gums. The lungs were normal, the heart was not enlarged, and the sounds, though distant and rather weak, were otherwise normal; the second sound was not accentuated either over the pulmonary or aortic areas. Nothing abnormal could be felt in the abdomen, but the skin was dry and inelastic. There was no abnormal resistence in the abdomen and no distension; at times, indeed, in the course of the case the abdomen became retracted, while before bouts of vomiting it became rather fuller. No enlarged glands could be felt in any part of the body. The blood showed a secondary anæmia, the red corpuscles numbered 3,340,000, the hæmoglobin amounted to 70 per cent., and there was a slight leucocytosis. The urine varied in specific gravity, with the occurrence of vomiting, from 1010 to 1030, and sometimes contained a trace of albumin. Further changes in the urine will be referred to later. The pulse was normal in rate, rhythm, and tension. The vomited matters were found not to contain any free hydrochloric acid. On admission a tentative diagnosis of carcinoma of the pylorus was made although no tumour could be felt. After a few days the stomach increased in size and seemed to support this diagnosis. On the other hand, the man's work, that of a plumber, and the history that he often took his meals without being able to wash his hands suggested that the anæmia, debility, and gastro-intestinal disturbance might be due to lead poisoning. However, there was no lead line on the gums such as there would have been, since his teeth were bad, if lead had recently been introduced into the system. There was no wrist-drop or paralysis and the pain was not that of lead colic. It is well to remember that it is easy to overlook the presence of grave abdominal disease in cases of suspected plumbism; thus I remember performing a post-mortem examination on a worker in lead who had a blue line on his gums and had had vomiting, constipation, and abdominal pain; he had a twist in the small intestine near the ileo-cæcal valve, at a point where the ileum was bound down for the last five inches to the posterior abdominal wall by a congenital deficiency of the mesentery. Incidentally it may be mentioned what an anxious problem the diagnosis of acute intestinal obstruction is in a patient with tabes; gastric crises may closely imitate mechanical obstruction and yet, of course, tabes in no way protects against acute intestinal obstruction. One is conscious of the importance of making a correct diagnosis so as to avoid an unnecessary operation on the one hand, and the calamity of allowing a patient to die from unrelieved obstruction on the other. Some years ago a patient under my care with tabes had an unusually severe and prolonged gastric crisis, and these questions were solved by waiting for developments.

A third possibility as to the condition at work in our No. 4051. patient was that it was a case of oral sepsis and that he was suffering from septic gastritis due to micro-organisms and pus swallowed as the result of pyorrhœa alveolaris. He was, indeed, given Giessbübler water to wash his mouth and teeth with and was provided with a tooth-brush; this simple mineral water was recommended to me by Mr. H. L. Albert for its purifying and cleansing effect on the teeth. The fact that the patient's general aspect suggested malignant disease did not necessarily render it unlikely that the whole condition was one of gastritis due to pyorrhœa alveolaris, for cases in which an initial diagnosis of carcinoma of the stomach had been arrived at have been cured by removing the cause—pyorrhœa alveolaris (W. Hunter[1] and R. J. Godlee[2]).

Turning now to the progress of the case, the patient vomited occasionally after admission and on Dec. 6th brought up 11¼ pints in 15 hours; the vomit contained bile but no free acid. Some of the vomit was dark in colour and extremely offensive; the presence of bile made it clear that the obstruction, if any existed, was below the level of the biliary papilla in the duodenum and it put the tentative diagnosis of carcinoma of the stomach out of court. After this copious vomiting the excretion of urine was suppressed. This is sometimes seen in cases of dilated stomach with copious vomiting and is analogous to the anuria that occurs in cholera. The stomach was washed out and the patient was put on rectal feeding. As the vomiting stopped he was, three days later, put back on to some food by the mouth, water being given by the bowel. On Dec. 10th the stomach was washed out. Two days later he vomited 78 ounces, having only had 30 ounces by the mouth since the stomach was washed out. There was therefore considerable gastric secretion or gastro-succorrhœa. This may be correlated with the fact that the chlorides in the urine were frequently found to be almost absent. After this rectal feeding was again resorted to for a time. On Dec. 17th the urine (specific gravity 1012) was found to turn of a dark port wine to brown colour when heated with nitric or any other mineral acid. The darkening was extremely marked and attracted instant attention. This colouration is produced by two different substances in the urine, the commonest being a colourless chromogen which represents indol in the alimentary canal and indican in the urine. The other body is melanin, the pigment found in melanotic sarcoma. Melanin is passed in the urine in cases of large secondary melanotic growths in the liver such as are generally secondary to a primary melanotic sarcoma of the uveal tract in the eye. Melanin is nearly always passed in a colourless or chromogen form (melanogen), and only appears after standing and oxidation or when nitric acid or some other agent, such as bichromate of potassium or a solution of perchloride of iron, is added to it. The colouration then occurs at once. The patient's urine did not darken with perchloride of iron, so the body was not melanin. It was therefore plain that there was some body allied to indican in the urine which was due to fermentation taking place in the intestinal tract and the absorption of bodies allied to indol. Auto-intoxication of intestinal origin frequently shows itself in this way in the urine. The appearance of the urine was exactly the same as that figured by Mr. A. Pearce Gould[3] in a case in which death occurred from toxæmia following acute intestinal obstruction. Dr. G. A. Buckmaster, who devoted much time to examining the urine, prepared considerable quantities of indican from the urine and found that there was 1·6 per cent. of creatinin in the urine, making the approximate weight passed in the 24 hours' urine 2·4 grammes as against the normal 0·9 gramme. What this increase in creatinin was due to or what it signifies is doubtful. It occurred to me that possibly it was due to creatin taken in from the suppositories on which the patient was subsisting, but Dr. Buckmaster's analysis of a suppository showed that it contained practically no creatin. Creatinin in the urine is either due to creatin taken by the mouth or is derived from the metabolism of the muscles. As it was apparently not due to food, it must be assumed that it was derived from the muscles of the body. The amount of urinary creatinin is said to be increased in wasting diseases, and as the patient was certainly losing flesh this seems the most likely explanation. For a few days the patient rallied and he took food by the mouth, but on Dec. 21st he vomited four times,

[1] W. Hunter: Transactions of the Odontological Society of Great Britain, February, 1899.
[2] R. J. Godlee: Transactions of the Royal Medical and Chirurgical Society, vol. lxxxiii., p. 342, 1900.
[3] Transactions of the Clinical Society of London, vol. xxxi., p. 47.

bringing up 58 ounces of bilious fluid, and rectal feeding was again employed. The next day hiccough began, and in spite of all kinds of varied remedies continued for a week, only stopping after intravenous transfusion (80 ounces) was performed by Dr. S. V. Pearson. After this the patient again improved for a time. On Jan. 7th, 1901, a rash appeared on the abdomen, and on the following day the amount of chromogen (indican) in the urine, which had for some time been small, was much increased, the urine, when warm, turning of a brown sherry colour with HNO_3. The interest of this rash is that in Mr. A. Pearce Gould's case of toxæmia after acute intestinal obstruction there was an urticarial eruption associated with this change in the urine. The patient began to wander, tried to get out of bed, passed his urine and fæces in bed, and was presumably suffering from auto-intoxication. On Jan. 10th he was again transfused and he showed some slight improvement. His temperature now began to go up and the left knee became swollen, Mr. Sheild opened the knee-joint and let out some thin pus which was found by Dr. C. Slater to contain streptococci. A few abscesses appeared in other parts of the body and it was clear that he had developed pyæmia. The probable source of infection was the transfusion wound which had been slow to heal. The treatment was directed against the streptococcal pyæmia by giving subcutaneous injections of anti-streptococcic serum. Sera from different sources were employed so as to hit off, if possible, a strain of streptococci the same as, or similar to, that causing the hæmic infection. The patient gradually got weaker, passed into a condition of semi-coma, and, as before, had attacks of vomiting from time to time; the severity of the pyæmia passed away and as far as that was concerned the treatment was successful, but the patient died from exhaustion on Feb. 6th.

The urine, which throughout the course of the disease was diminished in amount, was constantly noted by Mr. A. S. Jex Blake. Its specific gravity was usually between 1010 and 1018; it was acid, sometimes it showed a trace of albumin, but never, even when suppuration was taking place, contained albumose. The amount of urea varied between 1·6 per cent. and 2·3 per cent., the normal being about 2 per cent. The indican reaction varied from time to time, sometimes being marked, at other times almost disappearing. The urine was free from urobilin; sometimes the chlorides were practically absent, while at other times they returned. The fæces contained bile and were often extremely offensive.

The case presented the features of recurrent attacks of vomiting, probably due to a dilated stomach, but as the vomit contained bile the obstruction was evidently lower down. The abdomen was never distended and was often much retracted, so it was assumed that there was obstruction in the small intestine, but as no tumour could be felt at any time the diagnosis was not thought to be sufficiently assured to justify an exploratory operation. It is noticeable that the bouts of vomiting followed the return to feeding by the mouth. That the obstruction was not absolute was shown by the passage of fæces containing bile.

At the necropsy, performed by Dr. W. J. Fenton, there was no ascites nor peritonitis. There was a tight stricture of the third part of the duodenum just where the mesentery crosses over it. From the outside it looked as if a string had been tightly tied round the duodenum; no growth could be seen externally. At first sight it looked like an example of stricture of the duodenum caused by pressure exerted by the superior mesenteric vessels and nerve. This condition has been described by Byrom Robinson[4] who performed laparotomy unsuccessfully on a case with enormous dilatation of the stomach and duodenum from this cause; he has also noted 20 cases in which dilatation of the duodenum began at this point and considers that it is especially apt to develop in patients with visceroptosis when lying on their backs. This is perhaps rather a novel view, but it deserves testing, and is at any rate on the same lines as the production of hydronephrosis by the pressure of abnormal renal arteries on the ureter.[5] Above the stricture the duodenum and stomach were slightly dilated and their muscular walls were a little hypertrophied. The small intestines and colon were collapsed. On opening the duodenum there was seen to be a white flat growth replacing the mucous membrane of the duodenum in the immediate neighbourhood of the stricture; there was more growth above the stricture than on the side towards the jejunum. The growth looked like a thick filter paper perforated at the apex fitted into a funnel. The stricture just admitted a cedar pencil. Above the stricture the growth tracked up towards the biliary papilla which it touched, and was just beginning to obstruct the outflow of bile since the common bile duct was dilated.

Microscopically the growth was a carcinoma with columnar cells. There were no secondary growths in any part of the body. The pancreas was large and fibrotic, probably from extension of infective catarrh from the duodenum into its ducts; Wirsung's duct was not dilated; there was no trace of growth in the pancreas. The mucosa of the stomach appeared healthy to the naked eye. Microscopically the cells of the glands were much altered and degenerated, but possibly there was a post-mortem change. The liver, which weighed four pounds, was in a condition of cloudy swelling; the gall-bladder was full of bile and the ducts were dilated. There was no jaundice and there never had been any during the patient's stay in the hospital. The other organs were healthy except for obsolete tubercle at the apices of the lungs.

There was, therefore, a carcinomatous stricture of the third part of the duodenum, which, though not entirely occluding the lumen of the bowel, had given rise to recurring attacks of obstruction. Liquid food in small quantities could have passed into the jejunum, but it is probable that from time to time food collected in the commencement of the third part of the duodenum just above the stricture and by bulging it downwards led to traction and so to complete closure of the fixed and already strictured part of the bowel.

As to treatment, rectal feeding was successful in temporarily alleviating the symptoms but could not be permanently persisted in, as the condition of the patient was far from being good. Gastro-enterostomy would no doubt have relieved him for a time—i.e., until he died from malignant disease—but the diagnosis was never sufficiently dogmatic to justify a speculative laparotomy in a man so gravely ill. It is true that stricture or growth in the small intestine was suspected on the grounds of the bilious vomiting, but in the absence of anything palpable on the abdomen this hardly justified an appeal to surgery.

General Remarks.

Malignant disease rarely attacks the small intestine, and when it does the growth is usually either in the duodenum or close to the ileo-cæcal valve. Malignant disease is less infrequent in the duodenum than in the lower part of the ileum, but is decidedly rare even there, as shown by the following statistics given by Schlesinger.[6] In 25 years there were in Vienna only seven cases of primary malignant disease of the duodenum among 42 000 post-mortem examinations, of which 3583 were cases of malignant disease, and of these 443 involved the intestines. In 18,000 necropsies at Guy's Hospital there were 10 cases of primary malignant disease of the duodenum, four of which were carcinoma (Perry and Shaw).

Malignant disease of the duodenum may be either carcinoma or more rarely sarcoma. Libman[7] has collected 15 cases of primary sarcoma of the duodenum. Some of the cases described as lympho-sarcoma, however, may have been only lymph-adenoma. A comparatively extensive tract of the duodenum may be involved by sarcoma. Its wall is usually softened by the sarcomatous growth and is often dilated, so that there are no symptoms of stenosis.

Primary carcinoma of the duodenum is much more localised and tends in most instances to produce an annular stricture. The cases in which it does not produce this effect are those where a small growth arising from the duodenal surface of the biliary papilla proves fatal by inducing jaundice and cholæmia or suppurative inflammation of the biliary tract before it has had time to grow to any size. There was an excellent example of this in the post-mortem room last week; a patient under the care of Dr. Isambard Owen, a man, aged 52 years, with jaundice and rigors, had a small columnar-celled carcinoma involving the duodenal surface of the biliary papilla and setting up suppuration throughout the bile-ducts and in the gall-bladder. With this general exception duodenal carcinoma gives rise to stricture of the intestine, at least in the great majority of cases. Schlesinger, Letulle,[8] and others have, however, recorded examples of exceptions to this general rule.

[4] The American Practitioner and News, August 15th, 1900, p. 125.
[5] G. N. Pitt: Transactions of the Pathological Society of London, vol. xiv., p. 107.
[6] Wiener Klinische Wochenschrift, 1898, No. 10, S. 245.
[7] American Journal of the Medical Sciences, vol. cxx., p. 309.
[8] Gazette des Hôpitaux, Dec. 9th, 1897.

Like carcinoma of other parts of the body, carcinoma of the duodenum is a disease of late middle or advanced life. In 41 cases which I have collected from various sources the average age was 52 years, being 53·4 years in 10 females and 51·7 years in 31 males. In 10 out of 33 cases collected by Nattan-Larrier[9] the patients were over 70 years of age. In the 41 cases which I have tabulated, probably including many of Nattan-Larrier's, seven patients were 70 years of age or upwards, the extremes being 80 years and 27 years. In 42 collected cases (not including the present case) 32 of the patients were males and 10 were females. The marked predominances of the male sex corresponds with the greater number of male victims in carcinoma of the tongue, œsophagus, stomach, and rectum. Malignant disease resembles ulcer of the duodenum in its preference for the male sex; in 127 cases of duodenal ulcer tabulated by Cullen[10] 108 were males and 19 were females.

Carcinoma of the duodenum is a columnar celled carcinoma which may show a transition to a spheroidal-celled type or can undergo colloid change. The growth almost always leads to stricture of the duodenum and to dilatation and hypertrophy of the proximal part of the duodenum and stomach. In a few instances the growth has perforated into the general peritoneal cavity and given rise to peritonitis; a localised abscess has also been observed from perforation. A definite tumour is palpable in the position of the duodenum in a small number of cases.

Carcinoma of the duodenum is difficult to recognise during life and presents a different clinical picture according as the growth is situated in the first, the second, or the third portion. It will therefore be most convenient to describe the three different forms.

1. *Carcinoma of the first part of the duodenum* is rare; in 40 collected cases the first part was affected alone in eight and together with the second part in five more. It is indeed remarkable that carcinoma of the pylorus does not extend into the duodenum more often than it does. It is, of course in some cases, where there is a growth on the position of the pylorus, difficult or impossible to be certain exactly how much or how little of the commencement of the duodenum has been involved, but most observers believe that carcinoma of the pylorus stops short at the pylorus. It is a point of some importance to have grounds for or against this belief, since if carcinoma of the pylorus does not tend to infiltrate the duodenum, excision of the pylorus for growth may, as far as this point is concerned, be recommended with a fair prospect of success. This question has recently been investigated by Cuneo and Lucène[11]; in 10 specimens removed during life for pyloric carcinoma, in only one did the growth manifestly extend into the duodenum and in three others there were microscopic foci of infection cells in the lymphatic vessels but not extending more than two centimetres from the pylorus; in the other six cases the duodenum was microscopically healthy. Therefore in cases where the pylorus appears to be healthy to the naked eye a surgeon should, in excising the pylorus for carcinoma, be fairly safe if he removed the first three centimetres of the duodenum at the same time. Carcinoma of the first part of the duodenum has practically the same clinical picture as carcinoma of the pyloric end of the stomach, and as it is a rare disease the commoner form will probably always be diagnosed in its place. It is, therefore, conveniently called "juxta-pyloric carcinoma of the duodenum"; another name for it, since it is above the level of the biliary papilla, is "supra-ampullary carcinoma." It is interesting to note that, just as in the case of the stomach, so in the first part of the duodenum, carcinoma may develop on a former ulcer. Perry and Shaw[12] give five cases in which a simple ulcer was thought to have become malignant. Nattan-Larrier refers to five additional cases of ulcer carcinomatosus of the duodenum, including one published by Letulle of colloid cancer in a man who had some years before been under his care with definite symptoms of duodenal ulcer. Ulcer can hardly be an important factor in the causation of duodenal carcinoma, since duodenal ulcer is practically limited to the first part of the duodenum, and carcinoma in that situation is rare. Thus 123 out of 149 duodenal ulcers collected by Dreschfeld[13] were in the first part of the duodenum. Again, from the frequency with which duodenal ulcer is latent during life, clinical evidence in favour of the previous existence of a simple ulcer is seldom forthcoming. It is, therefore, on the post-mortem observation that we have to depend, and it may be rather difficult to be sure whether there is wide ulceration and sloughing of a growth or the development of carcinoma in a pre-existing ulcer.

2. *Carcinoma of the second part of the duodenum.*—This is the most frequent form of primary carcinoma of the duodenum. In 40 collected cases the growth was limited to the second part in 24, while in five others the first part was invaded as well. If it occurs in the upper part of the second portion of the duodenum—that is, above the level of the biliary papilla—it will give rise to much the same symptoms as carcinoma of the pylorus; if, on the other hand, it involves the biliary papilla the flow of bile will be interfered with and jaundice or other complications will occur; while if it is well below the biliary papilla it will by narrowing the lumen give rise to obstruction with bilious vomiting. Carcinoma has a special tendency to arise in the duodenal mucous membrane covering the biliary papilla. This must be differentiated from carcinoma arising inside the biliary papilla or in the ampulla of Vater, the channel common to the terminations of the common bile-duct, and Wirsung's duct of the pancreas. The term "carcinoma of the ampulla of Vater" is sometimes erroneously applied to a carcinoma of the duodenum involving the biliary papilla. When carcinoma arises on the duodenal surface of the biliary papilla the flow of bile is interfered with, though it is not, as a rule, completely blocked. A change that very frequently follows on this and may rapidly kill the patient is suppurative inflammation of the bile ducts. The partial stagnation favours infection, and the growth, while not completely occluding the lumen of the papilla, favours duodenal catarrh and its extension into the common bile and pancreatic ducts. The duct of Wirsung may also become dilated. The biliary papilla is a favourite site for the development of carcinoma; possibly this is due to some fœtal displacement or irregular inclusion of epithelial cells during the development of the hepatic diverticula from the primitive duodenum. It is interesting to note that the disturbance, incident on the outgrowth of the hepatic diverticula from the duodenum, may lead to a congenital narrowing or to atresia of the bowel at this point, analogous to congenital atresia of the œsophagus. An innocent papilloma is sometimes seen to arise from the duodenal surface of the biliary papilla, and it is, I think, probable that carcinoma may subsequently develop in such a growth. The question has been raised whether impacted gall-stones inside the ampulla of Vater have any bearing on the development of new growth on the duodenal surface of the papilla. On the face of it this seems improbable, and though D. K. Dickinson[14] has recorded the association of these two conditions, this experience is almost unique.

From its situation primary carcinoma of the intestinal mucous membrane of the biliary papilla is spoken of as juxta- or peri-ampullary carcinoma. As a rule, peri-ampullary duodenal carcinoma imitates carcinoma of the head of the pancreas and gives rise to jaundice associated with an enlarged gall-bladder. Jaundice was present in 23 out of 25 cases quoted by Mathieu.[15] In rare instances, however,[16] the growth, although involving the papilla or invading the bile duct, does not give rise to jaundice. The jaundice may vary, be intermittent, or, as in the case under the care of Dr. Isambard Owen, disappear for a time; it thus differs from the permanent and progressive jaundice seen in carcinoma involving the common bile duct, the cavity of the ampulla Vateri, or the head of the pancreas. The intermittence or disappearance of jaundice in duodenal carcinoma involving the biliary papilla must depend on the growth ulcerating and thus no longer obstructing the flow of bile; if the tumour goes on growing it may again lead to obstructive jaundice. Though the biliary papilla is a favourite starting point for carcinoma the growth may begin elsewhere in the second part of the duodenum and involve it by extension.

3. *Carcinoma of the third part of the duodenum* is the least frequent of all the three varieties. In 40 collected cases (not including the present example) it was only found in three. It is sometimes spoken of as infra-ampullary or juxta-jejunal carcinoma of the duodenum. The symptoms are those of intermittent obstruction, as in the case brought

[9] Gazette des Hôpitaux, Dec. 9th, 1897.
[10] The Scottish Medical and Surgical Journal, 1897, vol. i., p. 639.
[11] Bulletin de la Société Anatomique, Paris, 1900, p. 732.
[12] Guy's Hospital Reports, 1893, vol. lv., p. 274.
[13] Allbutt's System of Medicine, vol. iii., p. 549.
[14] New York Medical Journal, 1879, vol. xxx., p. 149.
[15] Traité des Maladies de l'Estomac et l'Intestine, p. 921.
[16] Descos et Bériel: Revue de Médecine, 1899, p. 633. Lannois et Courmont: Ibid., 1894, p. 291.

forward to-day, with bile in the vomit. It thus resembles pyloric obstruction except for the presence of bile and pancreatic juice in the vomit. The occurrence of bile should at once suggest carcinoma of the duodenum below the biliary papilla or a gastro-biliary fistula. In such a case the vomit should be tested for trypsin by seeing whether fibrin is digested in an alkaline solution. In this way the diagnosis between the two conditions might be made.

AUTOPSYCHORHYTHMIA OR REPETITION PSYCHO-NEUROSIS.

MORBID RHYTHMIC FORMS OF AUTOMATICITY AND RHYTHMIC FORMS OF MENTAL ALIENATION.

BY C. H. HUGHES, M.D.

THE pathetic story of the accountant who, in a state of nervous exhaustion and cerebrasthenia, was carried to Bethlem Hospital pitifully repeating, "Once one is two, once one is two," the mistaken calculation having ruined him, is well known in the literature of nerve perturbation. The record is a story of brain exhaustion often repeated in other forms, the real nature of which is often not well understood in time, either by the family medical adviser or the public, to avert disaster. There are other phases of this morbid mental state in which a fear of mathematical inaccuracy or mental agitation on account of the interrupted rhythm are not characteristic, but where simply an insistant impulse to automatic repetition exists that will not readily down at the bidding of the normal will, even though regard for the proprieties of environment demand suppression. The constant repetition of a rhythmical movement in the mind, regardless of time or place or circumstance, and which an enfeebled volition cannot regulate to conform to the requirements of environment, characterises this symptom of brain overstrain and psycho-motor automatic impulse. Neuropathic and consequent psycho-motor neurasthenia appear to be at the bottom of this condition, or have probably been at some time in the life of the nervous mechanism, before the inception of the morbid automatic repetitional impulse. It is as much a symptom as the ill-at-ease, restless, tired, and fidgety state and morbid phobias of neurasthenia are symptoms.

Tuke (Psychological Dictionary) touches this subject closely under the discussion of imperative ideas, coprolalia, and obsession, and mentions the instance of a friend who wrote to him after composing a poetical work, saying in his letter that he longed to get the poetical work out of his brain and to begin on "fresh woods and pastures new," but found it "difficult to make the vibrations cease when the intellectual chimes have been set to a particular tune," recognising the brain automaticity which is an essential feature of what we are attempting to describe. I would take this case from the class of imperative ideas and place it in the new psychological class like the following, to which I would apply the new term which I coin—"autopsychorhythmia."

A handsome, bright, and accomplished young lady, aged 18 years, with a maternal unstable nerve heritage but a healthy father, a student of music, advanced and promising, came to me from a distant city suffering from exaggerated reflexes, insomnia, hyperideation, troublesome illusional fancies, and a musical rhythm continually running in her mind. Day and night the automatic repetition of tunes and musical cadences ran constantly through her mind. Upright or recumbent, in the waking state or in her fitful sleep, the automatic rhythm persisted. She thought and dreamed of music and felt its rhythmical influence continually throughout her nervous organism. Her pulse was rapid, her heart-beats were over-forceful, her pupils were abnormally mobile and dilated, her digestion was tardy but finally adequate, the bowels were torpid, the skin was relaxed, and she felt continually tired. She recovered under rest, change of environment, cessation of study and piano practice, withdrawal from musical companionship, brain-tranquillising galvanisations, ether-menthol evaporating lotions to the head, chemical brain restraint, and pepsines and laxatives. Had she continued much longer in her vicious course of incessant overstudy this handsome and promising girl would have passed from the morbid psychical automatism of neurasthenic excitability into positive insanity, as I have seen others pass, especially ambitious, self-sustaining teachers, to go beyond the line that marks the morbid psychical automatism of incessant overaction into the realm of actual insane aberration. These cases can be saved if treated in time by the alienist and neurologist, but not by any local treatment outside of the brain, unless perchance the change of environment and its influences are of so tranquillising, diverting, and restful a kind as to bring about through Nature's unaided resources the needful recuperation of the nerve instability and morbid automatism of brain overtax. If these unfortunate persons get only throat treatment they are likely to be lost, unless perchance the brain-rest from cessation of work and changed environment should bring about a cure.

A young unmarried man, who speedily became hopelessly insane and soon after died demented, displayed the beginning of his breakdown by exclaiming *sotto voce* while riding with me, "Beethoven! Beethoven!" This he would continually repeat. An aged lady, over 70 years of age, who became somewhat demented, would often repeat, "Yes, I love God! Yes, I love God!" in the midst of conversation and when alone.

A music teacher and composer of great genius, and now perfectly well, could not refrain when he first saw me from going through the movements of fingering the key-board of the piano and a tra-la-la accompaniment. He had just finished a Herculean task and was on the verge of a disastrous breakdown characterised by profound insomnia, marked general restlessness, and psychical excitability.

A charming young lady patient under my care at the asylum at Fulton, Mo., in 1870 first attracted attention by repeating a call to the chickens, of which she was very fond when at home. "Chicky, chicky, chicky," she would repeat, and as her insanity became pronounced she would say "Chicky" all day and far into the night until put to sleep by hypnotics. A suppression of the menses accompanied or preceded her insanity and returned with the return of her sanity. She recovered after six weeks' treatment with bromide of potassium, timely hypnotics, tonics, aloetic laxatives and gelsemium.

Another patient under my care at Fulton, a man of upwards of 50 years of age who had gone insane and had turned grey in a few weeks' time under the strain and misfortune of the Civil War, having lost most of his property, principally in slaves, and become suddenly bankrupt, assumed a bent-over attitude as he walked about night and day exclaiming, "My God, how can I stand it; how can a man carry the world on his shoulders?" This man, who was possessed of good physical vigour for his years and was an excessive user of tobacco, reminded me of the pictures of the mythical Atlas. After the acute stage of his malady had passed he would repeat only the words "How can I stand it?" and this utterance he would make years after the inception of his insanity, even at times when provoked to smile or when asking for a chew of tobacco, after the fires of the early mental conflagration had gone out and his life seemed to be no longer one of psychical pain. The scar remaining among the cerebral cinders kept up the automatic cerebral refrain, "My God, how can I stand it? How can I stand it?" long after he had ceased to feel the poignant mental pain of the acute stage of his disease.

The peculiarity of Samuel Johnson who, after a good deal of mental strain, could not pass a single one of the stone posts which stood at regular intervals along the pavement of the streets in his native town of Lichfield without laying his hand on the top of each one is also *apropos* to our subject. Fortunately Johnson never broke down seriously in his nerve centres. His repetitional automaticity did not pass to an extremely morbid stage.

Under the heading of "Letter Counting," the Paris correspondent of the *British Medical Journal* mentions a case in point reported to a Bordeaux society by Dr. Ginestos. The subject was a young man who since the age of 10 years had had an irresistible impulse to count the letters in a word or phrase that he heard, saw, spoke, or thought. At night he slept without dreaming. When he did not talk he invented phrases and counted the letters in them. 32 was a number that gave him satisfaction; the number 13 displeased him, but nevertheless he did not recoil from arranging phrases with 13 letters in them. This unceasing automatic operation did not in any way interfere with his daily work or his reading or with the carrying on

of a conversation. A reference to this interesting case appears in the columns of a number of the *New York Medical Journal* which I do not at present recall. Echolalia, coprolalia, &c., are likewise somewhat germane to this subject as showing a similar but graver state of repetitional impulse and obsession, but rhythmic repetitional automaticity is what we are now considering. There are likewise references of interest, not wholly *malapropos*, in Forbes Winslow's "Obscure Diseases of the Brain and Mind." Indeed they may be found in many books devoted to psychiatry.

I have heard a chronic alcoholic repeat over and over through the day, "Little Bo-Peep, he lost his sheep, and doesn't know where to find them," &c., and have known chronic lunatics who would repeat some long-ago-learned distich or rhyme or some insanely-constructed jingle of words in maudlin monotone, from the day's beginning to the ending thereof, in all their waking hours, some of them singing their peculiar song, like the dying swan, to the end of their unfortunate lives. Some would recite their phrases backward, a transposition from the way in which the verses were written. If we carefully scan the speech and song of the insane we will find much not yet recorded and many forms of this morbid psychical display of automaticity. It has as many peculiarities of expression as the singularities of writing and speech in agraphia and amnesia and other forms of aphasia. More extended rhyming forms of speech or song, evincing mental spontaneity and sometimes marked ability of improvisation among the insane, are interesting and common in hospitals for the insane, but they do not strictly belong to our present subject. The following case has been reported by Forbes Winslow:—

> A lady who had been 18 months insane detailed to me, after her recovery, the symptoms that characterised her derangement. She informed me that for nine months previously to her being considered mentally afflicted she was fully aware that she was not "quite herself." "My general health then became much out of order and I had a severe attack of English cholera, followed by great debility which confined me to my bed for several weeks. It was during this illness that my foolish fancies began to annoy me. At this time I used to talk out loudly to myself, a thing I never did before. This was irresistible. I ejaculated the most foolish remarks, and at times, too, with wonderful volubility of speech. I did my best to control myself in this particular, but found it difficult to do so. I was quite conscious that my mind was affected, and yet no delusion had taken possession of my intellect. For several days I succeeded, by strong efforts of thought, in checking this ridiculous inclination to utter absurd expressions, but I awoke one night in an excited state, from a troublesome dream, and I began then to vociferate a number of most incoherent expressions to this effect: 'You shall do it.' 'No you sha'n't.' 'He is like Satan.' 'Why don't you say the devil?' 'Ah! Ah! Ah!' 'It is beautiful.' 'No he devils.' 'I can't be saved.' 'You have no hope.' 'Suicide.' 'Poison.' 'Hang yourself.' 'They are after you.' These strange remarks continued for nearly two hours, when I fell asleep, and arose much relieved. My mind, however, was for some time afterwards not in a right state, although I had intermissions from the misery I suffered. Eventually I became quite insane and, I am informed, remained so for nearly 11 months. During the whole of that time I fancied I was in hell and tormented by evil spirits. I thought every person near me to be a devil. My mind was gradually restored to a healthy state. I cannot say when I first began to feel that I was recovering."

I should like as forcibly as possible to call your attention, as I think Forbes Winslow has done before me, to the significance of absent-mindedness, abstraction, inattention, and what since Carpenter we have called "psychic automaticity," as precursors of mental aberration. Of course, these states signify little unless they are progressive or until they have reached the verge of morbidity with profound and uncontrollable disregard of the proprieties and harmonies of environment. Nevertheless, they are worthy of note and mean much very often to the closely observant alienist clinician. They may serve to start him in the right direction of search for grave impending psychical malady in its avertable stage.

I saw once a charmingly-voiced lady suffering from this form of cerebrasthenia and neurasthenia who subsequently while abroad cultivating her voice developed a condition of rhythmical, chanting, psychical aberration, *folie chantant*, while mistakenly having her throat and vocal cords treated. She once consulted me. I saw the impending catastrophe and could have averted it, but was not asked to treat her further and my further advice of prompt brain-rest and nerve recuperation was not followed and the catastrophe came. Her trouble began with musical cerebrasthenia.

A young manustupral neurasthenic was brought to me by his father some years ago. During my first examination of him he interrupted the proceedings, exclaiming, "It don't correspond." He had been a studious youth of good morals, and his mind was probably vaguely reverting in automatic manner to some problem in mathematics worked at in other days. I could not get him to say what he meant or to take treatment. After that he passed speedily into stuporous dementia and soon died. His mother was neurotically enfeebled at the time of his birth and his malady was evolutionally predestined, the masturbation having been an incidental developmental sequence probably as well as a contributing cause.

A gentleman of extensive business affairs who came to me on the verge of financial and business bankruptcy, but who is now after many years of health successful in a new but less harassing line of business, would continuously say to himself: "Too many irons in the fire, too many irons in the fire." His intellect was clear but his brain was jaded and unstable—in that stage of cerebrasthenia that so often precedes the final brain-break of insanity. The closing out and winding up of his business saved him for recuperation and another and less harassing and more successful career. These cases are significant to the neuro-psychological clinician and they are amenable to cure if timely treated and if we are not misled from the brain, which is the central origin of the trouble, to the peripheral symptomatic expression. Insomnia and other forms of restlessness precede and accompany their expression, as likewise do disturbed visceral states dependent upon vagus innervation. Like most voice failures and many altered chirographical expressions, the autographs of morbid brain and nerve states, as in general paralysis and disseminated and posterior spinal sclerosis, the disease is not in the organs of expression in which the symptoms show, but chiefly in the brain, the allied peripheral neural mechanism only subserviently participating. Other clinical illustrations might be cited from my experience, as, for example, some forms of choristers' and pianists' palsy, &c., but these are omitted for the sake of essential brevity and to avoid possible contention. To an audience of *savants* like that before me one word will suffice for many.

This morbid state of the nervous system is so distinctively peculiar as to be entitled to distinctive designation. All have observed it, especially those who have added to their neurological experience opportunities for extensive observation in psychiatry. It is a symptom and precursor, if unarrested, of insanity, and though it may stop short of the greater *dénouement* by fortuitous change in the life habits or thorough, timely, skilful treatment of the individual, it is a serious condition of the brain demanding our best thought and effort for its prompt relief and calling for cautious, forceful admonition as to the impending peril of its persistence. I have used, for want of a better term, "autopsychorhythmia," since under the dominance of this morbid state of brain and mental expression the mind loses to a degree its volitional spontaneity and becomes abnormally automatically rhythmical in psychical feeling and expression. And when the stage of insanity is reached the mind so expresses itself, regardless of the proprieties of place or occasion and out of normal harmony with rational environment. The distinction between morbid and normal autopsychorhythmia is in the persistent and inopportune obtrusion of the rhythmical repetition in manner not in harmony with the environment of the individual. The will does not attempt its suppression, or, if it does, it cannot, when and where the proprieties demand it, whereas within normal limits it selects suitable occasions for permitting the rhythmical repetitions that run through the mind to go on uninterruptedly and can effectually check them on proper occasions. All perfected education of the psychical neuron centres develops an automatic aptitude for easy repetition. This is not a morbid feature of mental action and is not what I have attempted to describe. It is the morbid aspects of this mental state, when normal regulated control is impaired and, in the graver conditions, lost, to which I invite attention as of significance to the neurologist and alienist. It is evidently a lesion, more or less grave, of the psychical inhibitory centres that claim our consideration and demands attention from the profession that it has thus far not adequately received. There is a neuriatrical with a psychiatrical, as well as a psychological, side to this interesting and important subject. It is the second to which I would call professional attention.

Involuntary psychical automaticity in many forms, including the feature which we are now discussing, is a forerunner of grave insanity which displays itself paramountly in lessened inhibitions of normal mental action as well as in impulsions to erratic conduct and in the many forms of

automatic mental aberration revealed in the actions and speech of the acknowledged insane, both within and without asylums. All symptoms, therefore, which point in that direction, even though remotely, claim thorough investigation and prompt remedial endeavour. Brain strain like that under discussion passing the line of morbid autopsychorhythmia is always a matter of gravity and solicitude. It is the limp that precedes the paralysis of the mental gait—the beginning spasm of overuse that may end in wrong movement. The brain thus going wrong should be made to rest and be brought back by neuropsychological treatment into habits of normal action.

Dr. Martin W. Barr[1] has discussed an interesting subject akin to our theme and rather more germane to it than the various forms of aphasia under which it is generally considered—namely, echolalia. Hammond, quoting from Winslow, gives the case of a woman who always said at her prayers, "Our Father which art in hell," meaning to say "heaven," and the case of a man from his own observation who said automatically, "Saw my lew off," to any question asked. There is no connexion, in my judgment, between my subject and any form of hypothetical transcortical aphasia or the motor aphasia of Broca's speech-centre. It is neither echolalia nor coprolalia, though I agree with Tuke that echolalia and coprolalia, as some forms of aphasia and other speech-defects do, portend, like autopsychorhythmia, insanity. They are morbid impulsions, and morbid impulsions are lesions of inhibition not far in advance of oncoming psychical aberration. Coprolalia, a tendency to express as well as to repeat foul language, is often heard among the insane, even among naturally modest and cleanly-minded women. Mills[2] records the case of a refined and cultured lady who would suddenly swear and gesticulate, and that of a boy who would suddenly utter filthy language and move his head, shoulders, and arms violently. These are common symptoms in the observation of insanity. These two cases are quoted by Barr as combining palmus or myriachit and coprolalia, as they undoubtedly do. But the Jumpers of Maine are victims of impaired volition and psychomotor irritation and some of them are not far removed from insanity. Mills then very properly classes echolalia under morbid impulse rather than under aphasia[3] and had he rested there he would have remained on undebateable ground but in a later article, as Barr observes, he classes true echolalia as a characteristic symptom of transcortical sensory aphasia.[4]

A similar but not the same state of mind as that of autopsychorhythmia may be seen in the feeble-minded as in the volitional repetitions of Barr's pupils at Elwyn, Pa., which he describes as echolalia. The boy Kirtie repeating "Kirtie, come to school to-morrow; Kirtie, come to school to-morrow morning," &c., is similar but not the same. It is the voluntary habit of a feeble mind to fix a mental impression. Something similar is sometimes also the habit of the infantile mind when learning to speak.

ADDENDUM.

The form of insanity in my observation to which autopsychorhythmia tends is that in which imperative conceptions predominate or have predominated in the initial stage of the mental disease. In aggravated form it is an imperative, resistless impulse to repetition of psychical impression in the form of verbal expression. In the Dictionary of Psychological Medicine Tuke broaches this subject under the definition of imperative ideas, but he does not compass it. He briefly discusses them under echolalia and certain of the morbid fears of neurasthenia, but my subject does not include morbid fears, illusions, or hallucinations, though they may coexist with it. Psychorhythmia is a tendency of the mind more or less resistless to repeat continually and non-volitionally its once volitional actions even at inopportune time and place. It is a habit volitionally induced which has passed into a morbid automatic impulse associated with brain overstrain or excitation. The habit excites the patient's concern and sends him, if he is an intelligent man, familiar with the possible resources of psychiatry, to seek relief in special medical advice and remedy. When this condition displays itself in unrestrained impulse of speech or song to the chagrin of the individual and the surprise of his friends it is an act out of harmony with his rational character and environment and is then initial insanity.

Another feature of our subject is shown in a tendency to imitative acts, such as grimaces and stuttering and spinal-cord and motor-centre movements (jumper's palsy), which by often and long repetition have become organised automatic impulsions no longer volitional with the individual and which sometimes are seen to pass into the acts of the insane. To discuss these now *in extenso* would make this paper too prolix. In the *Alienist and Neurologist* for January, 1897, under the heading "Imperative Conceptions," I have discussed more *in extenso* this subject. I have there recorded the case of a victim of coprolalia who upon being advised to quit breaking out with sudden profanity, said: "I can't; I would that I could. I go about my work crying and talking. I will say, 'I will not do that any more,' and it will not be five minutes until I will be at it again." "I think and say such awful things. I never did so before and do not believe I want to now."

Discussing echolalia Dr. Martin W. Barr records a case under his observation of a beautiful and refined girl attending a boarding school who would at intervals give sudden expression to three words successively, the first vulgar, the second foolish, and the third profane.[5] This condition in some of its features is related when in intense morbid degree to our subject and proves its psychopathic basis and affinity with psychorhythmia. Morbid autopsychorhythmia has relation to the spasmodic word outcries of the insane—coprolalia and echolalia, &c., similar to the rhythmical spasm of athetosis in comparison with the jerky spasm of tetanus, chorea, or the spastic movement of lateral sclerosis.

The pathological lesion of autopsychorhythmia is evidently in the mind area of the brain cortex. It is truly transcortical and not localised exclusively in the speech area. It is a psychical and not purely psychomotor involvement—a psychical lesion shown in peculiarity of psychomotor expression. If in "this frame the bearings and the ties, strong connexions, nice dependencies," an ancestral "blot upon the brain" has left for transmission a latent hereditary scar of aberrant mental action, we may expect to see the psychical perversion of insanity develop under stress of brain and mind, such as destroys or weakens its normal regulating power. "That way madness lies; let us shun that." It may show in obscure, if not in plainer form, or in mental eccentricity, and thus mark and mar the after-life.

St. Louis.

[1] Journal of Nervous and Mental Diseases, January, 1898.
[2] Ibid., September and December, 1891.
[3] American Text-book of Diseases of Children; Speech Defects and Anomalies, p. 633, quoted by Barr.
[4] Echolalia, by Martin W. Barr, p. 6. Dercum's Text-book on Nervous Disease, first edition, p. 440.
[5] Echolalia. Journal of Neurology and Mental Disease, January, 1898, p. 20.

CORRESPONDENCE BETWEEN CHOLERA AND THE PREVALENCE OF COMMA BACTERIA IN WELL WATERS OF GUJERAT DURING THE FAMINE OF 1900.[6]

BY GEORGE LAMB, M.B., C.M. GLASG.,
CAPTAIN, INDIAN MEDICAL SERVICE.
(*From the Research Laboratory, Bombay.*)

AT the end of May of last year, on the suggestion of Mr. Haffkine, I was deputed by Government to make a short tour through some of the famine districts in Gujerat. The object of this tour was twofold: (1) to ascertain if the high mortality from a disease which was being returned under the name of "fever" could be accounted for by the presence of an epidemic of relapsing or spirillum fever; and (2) to examine as many water-supplies as possible for the presence of comma-shaped micro-organisms. This investigation was undertaken with a view to finding out whether any relation could be traced between the incidence of cholera and the prevalence of these organisms in the drinking waters. It is the result of the latter of these researches which I propose to put before you this evening.

[6] A paper read before the Bombay Medical and Physical Society on Jan. 18th, 1901.

Unfortunately, by the time I arrived on the scene the cholera epidemic had practically spent itself. It was then limited to sporadic cases in some of the districts, while in other districts it had completely died out. The investigation, however, was not without results, which if fully confirmed and extended would do much to assist us in combating epidemics similar to that which swept through the famine districts of Gujerat.

It would be well at the outset to give a brief outline of the methods which were employed in this research. These may be stated as follows. On arriving at a locality samples of as many well waters as possible were collected in small sterilised bottles. If sterilised bottles were not available each bottle was first washed out many times with the water which was to be examined. Each sample was as soon as possible after collection planted into a solution of peptone and salt (1 per cent. peptone and 0·5 per cent. salt). This culture medium, which, as is well known to all of you, favours greatly the growth and propagation of comma-shaped bacteria, was prepared as required by boiling in a small pot for one hour the requisite amount of peptone and salt in ordinary water. The solution was then allowed to cool. When cool it was divided up into ordinary wine-glasses which were covered over with pieces of paper. Both the wine-glasses and pieces of paper had been previously sterilised as far as possible by boiling them for from half an hour to one hour. The wine-glasses after insemination with the water were kept absolutely still so as not to disturb and to break up any veil which might grow on the surface. It is necessary to remark that on this medium the early growth of all comma organisms takes place on the surface where there is free exposure to the oxygen of the air. Incubation was allowed to go on for from 18 to 24 hours at room temperature, which ranged between about 80° and 100° F. Zigzags on agar slopes were then sown from the veil which had grown on the surface of the peptone, three tubes of such being prepared without recharging the needle. In this manner isolated colonies of the various bacteria which happened to be present in the veil were readily obtained for further investigation. At the same time a dry film preparation on a slide was made from the veil. All specimens, both agar cultures and slides, were at once despatched to the laboratory in Bombay for detailed examination. This examination was undertaken by Dr. Hanna and was finally completed on my return at the end of the tour. To each specimen and culture a distinguishing number only was affixed. In my notebook a description of every preparation was entered. I also carefully noted the place where these were obtained and the condition as to the prevalence of cholera there. In this way the examination of the preparations prepared by me was made independently by a man who had no knowledge of the source of the specimens. The final result was compiled by putting together these two sets of records—my own and that which was made and kept by Dr. Hanna in Bombay.

Every comma-shaped or spirillar organism isolated and obtained in pure culture was subjected to the various bacteriological tests which are used to differentiate the true cholera vibrio from other non-pathogenic commas and spirilla. It is quite unnecessary for me to enter into the details of this long and tedious investigation. It is sufficient for our present purpose to state that some of the bacteria isolated were easily differentiated from the cholera comma. On the other hand, in one or two instances it was only by means of the serum agglutination test that such a distinction was possible. This test, as you know, consists in bringing the micro-organism under investigation in contact with the diluted serum of an animal previously treated by injections of a known cholera vibrio, or *vice versâ* by treating an animal with injections of the suspected microbe, and then bringing in contact the diluted serum of this animal and a culture of a known cholera germ. In either case, if we are dealing with a true cholera organism, immobilisation, agglutination, &c., of the bacteria quickly take place. Briefly, then, I may state that the result of this research was to show us that not one of the comma-shaped bacteria which had been isolated from Gujerat waters could be termed a true cholera vibrio. There was, however, no doubt, as judged from their appearance under the microscope, their staining reactions, and their growth on different media, that they all belonged to the tribe of curved bacteria, which includes the true cholera-producing microbe.

After this point had been settled the next question was to ascertain what relation there was between the presence of these comma-shaped organisms in the waters of a district and the prevalence of cholera in that district. The data which bear on this question are as follows (*vide* Table I.):—

TABLE I.

No.	Locality.	No. of wells examined.	Commas present or not.	Condition as to the prevalence of cholera.
1	Broach Poorhouse.	One.	Present.	15 cases in all among recent arrivals; last case 11 days before.
2	Maturia Tankworks.	Two.	Present in both.	Cholera very prevalent—about a month before; at time of examination only four or five cases daily.
3	Wansar Tankworks.	Three.	Commas in one well only.	14 cases of cholera in all; last case five days before examination.
4	Kaira Missionhouse.	One.	Absent.	No cholera at time of inquiry. Cholera had been prevalent some time before.
5	Matar Poorhouse.	Two.	Present in one only.	33 cases of cholera in all; last case two days before examination.
6	Nadiad Poorhouse.	One.	Present.	No cholera for the 39 days before examination. Recrudescence shortly afterwards.
7	Nadiad Town.	Three.	Present in two.	Sporadic cases at time of examination. Recrudescence shortly afterwards.
8	Anand Poorhouse.	One.	Present.	62 cases of cholera in all; last case five days before examination.
9	Anand Village.	One.	Present.	Cases occurring sporadically.
10	Dakor Tankworks.	Six.	Absent in all.	Cholera very prevalent in April, when works had to be closed. Re-opened in beginning of June; no case had recurred. Examination on June 12th, 1900.
11	Godhra Town.	Four.	Absent in all.	No cholera since a month.
12	Godhra Poorhouse.	Two.	Absent in both.	No cholera since a month.
13	Dohad Poorhouse.	Two.	Absent in both.	No cholera at time of examination.
14	Dohad Town.	Four.	Absent in all.	No cholera at time of examination.

1. *Broach Poorhouse.*—One well; comma-shaped organisms were found in this well. 15 cases of cholera had occurred here, the last case 11 days previously to the examination.

2. *Maturia Tankworks.*—Two wells; comma-shaped bacteria were found in both. Cholera had been very prevalent about a month before. At the time of examination only four or five cases were occurring daily.

3. *Wansar Tankworks.*—Three wells; commas very like the cholera vibrio, and only able to be differentiated by means of the serum agglutination test, were found in one well. The other two wells were free from any comma vegetation. 14 cases of cholera had occurred in this camp. The last case had been admitted into hospital five days before the examination of the water.

4. *Kaira Missionhouse.*—One well; no comma-shaped organisms were found. There was no cholera here at the time of inquiry. It was reported, however, that some severe sickness, but not known of what kind, was prevalent; cholera was stated to have raged some time before the examination of the well.

5. *Matar Poorhouse.*—Two wells; commas were found in one only. 33 cases of cholera had occurred in this poorhouse previously to the examination, the last case only two days before.

6. *Nadiad Poorhouse.*—One well; comma-shaped micro-organisms were found in this well. No case of cholera had occurred among the inmates since 39 days.

7. *Nadiad Town.*—Three wells; commas were found in two out of the three. Sporadic cases of cholera were still occurring in this town, but they were not severe.

8. *Anand Poorhouse.*—One well; a comma-shaped micro-organism closely resembling the cholera vibrio was isolated from this well. 62 cases of cholera had occurred amongst

the inmates. The last case had been admitted into hospital five days before the examination of the well.

9. *Anand Village.*—One well; commas were found in this water. Sporadic cases of cholera were still occurring in the village.

10. *Dakor Tankworks.*—Six wells; no comma-shaped bacteria were found in any of these wells. Cholera had raged among the workers at this camp with such force during the month of April that the works had to be completely closed. They were opened again in the beginning of June. Since then no cases of cholera had occurred up to the date of the water examination (June 12th).

11. *Godhra Town.*—Four wells; no commas were found in any of these wells. No case of cholera had occurred in the town of Godhra itself since about a month. At the time of the water examination a few convalescent cases were being treated in the hospital. These cases, however, came from some outlying villages where the disease was still sporadic. There was no recrudescence of cholera in Godhra itself till two months after my visit.

12. *Godhra Poorhouse.*—Two wells; no comma-shaped bacteria were found in either of these wells. No case of cholera had occurred in this poorhouse since a month.

13. *Dohad Poorhouse.*—Two wells; no commas were found in either. There was no cholera in this poorhouse at the time of examination.

14. *Dohad Town.*—Four wells; no curved microbes were found in any of these water-supplies. There were no cases of cholera occurring in Dohad Town at the time of my visit there.

From the above synopsis it will be seen that 33 well waters in 14 different localities were examined. In eight of these localities comma-curved bacteria were found, while in six they were absent. In seven of the eight localities just named cases of cholera were still occurring either daily or at intervals, the last case having occurred two, five, five, and 11 days before the samples of water were taken. In one place only of the eight—viz., the poorhouse at Nadiad, to which reference will be made further on, there had been no case for the last 39 days. On the other hand, in all of the six localities where no comma-curved bacteria were detected in the laboratory my notes show that no cases of cholera were occurring at the time when the water-samples were collected for examination. There was thus a marked correspondence between the prevalence of this disease and the presence of curved micro-organisms in the water-supplies. In the case of the poorhouse at Nadiad there had been no cholera for 39 days, although curved bacteria were found in its well. Cases, however, continued in the town, and shortly after my visit Mr. Swift, the personal assistant to the Collector of Kaira, informed me that a severe recrudescence of the disease had occurred in the locality. The finding of curved bacteria there may therefore have been due to a recent re-infection of the well. The poorhouse had been practically vacated at the time of the inquiry (during the preceding week the population was reduced from 500 to 66 inmates) and such re-infection may not have had time to show in the form of cholera cases.

The above relation between the incidence of cholera in a locality and the presence of curved comma-shaped micro-organisms in the waters obtains an enhanced significance from a comparison with the result of a similar investigation which Mr. Haffkine and Dr. W. J. Simpson, then health officer of Calcutta, made into the distribution of curved bacteria in the tanks and other reservoirs in Calcutta during April, 1894. A detailed account of this research is to be found in the *Indian Medical Gazette* of March, 1895. On that occasion 82 specimens were examined; these were taken from 211 localities. 432 of these specimens were from 110 tanks, while the other 150 were taken from private wells, from drains, from the river Hoogly, from the canals, from bathing platforms, from street hydrants, in milk markets, &c. No relation between the cholera outbreak and all the last-named sources was detected. The tanks, however, gave the following result. Of the 110 tanks examined (1) 46 were tanks round which cholera existed at the time of the examination; (2) five were tanks round which cholera had existed from a month to six weeks previously and had disappeared since; and (3) 59 were tanks round which cholera had not appeared at all during the four months of 1894. Out of the 46 tanks of the first category comma-shaped organisms were found in 42—i.e., in 91·3 per cent.—and missed only in four. Out of the five tanks of the second category curved comma bacteria were found in none. And out of the 59 tanks of the third category commas were found only in 11—i.e., in 18·6 per cent.—and were not found in 44—i.e., in 81·4 per cent. The comma-shaped bacteria found in these tanks varied greatly as to their detailed characteristics, but all belonged to the class of curved bacteria which have the faculty of turning into spirilla and long threads when grown under suitable conditions. It may further be noted that these Calcutta commas and spirilla were not subjected to the serum agglutination test mentioned above. It is therefore more than probable that only a small proportion of these organisms were real cholera-producing bacteria.

The prevalence of comma-shaped micro-organisms which although not the true cholera vibrio belong to the same tribe in places where cholera exists and their absence from places free from cholera is a fact somewhat difficult of interpretation. Mr. Haffkine, commenting on this point in a recent report to Government, put forward the following hypothesis. He says that such results can best be interpreted by the supposition that the whole tribe of curved bacteria, including the typical cholera vibrio, requires for its existence similar or very comparable conditions, and that on the one hand wherever these conditions are inimical to the cholera germ, no curved bacteria of any kind are to be met with; and, on the other hand, wherever the local conditions are favourable to the growth of curved bacteria in general the true cholera-producing microbe develops and propagates in large numbers, causing an outbreak of the disease in the adjacent population. The results which were obtained in Calcutta and in Gujerat, if observed and confirmed in a number of similar instances, would tend to show that without having any information as to the actual prevalence of cholera in the districts the bacteriological examination of the waters would give a useful warning as to the danger from cholera which exists in those districts. Thus, as already mentioned, of the 14 localities in Gujerat where the waters had been taken from eight—viz., Broach Poorhouse, Maturia Tankworks, Wansar Tankworks, Matar Poorhouse, Nadiad Poorhouse, Nadiad Town, Anand Poorhouse, and Anand Village—showed themselves in the laboratory examination as presenting such a danger. The others would have been returned as free from cholera. Further, it is evident that some practical advantages may be derived from such an investigation as was carried out by this laboratory in Gujerat and by Mr. Haffkine and Dr. Simpson in Calcutta. These advantages may be briefly stated as follows:—

1. In a place vacated on account of cholera the examination of the water may help to determine the date when it becomes safe to return to the place. Thus, in April the Dakor Tankworks had to be vacated on account of cholera. In June the water-supply was examined and showed no comma-curved bacteria. As mentioned above, the people who were permitted to return during the month remained free from cholera.

2. In a place where there are only a few sporadic cases of the disease a similar examination may give warning if a serious outbreak or recrudescence is threatening. Thus, at the time of the water examination at Nadiad in the poorhouse there had been no cases for 39 days and in the town the disease existed only in a mild form. But an examination of four wells revealed in three the presence of comma-shaped bacteria. In apparent connexion with this result cholera broke out again in this locality shortly after.

3. In a locality where cholera is epidemic the bacteriological examination of the water-supply may reveal those sources which are dangerous. Now, by closing such dangerous sources or otherwise preventing the people from using the water from them, the necessity for vacating the whole locality may be avoided, and at the same time the occurrence of cases prevented. Thus among the Calcutta tanks cited above often such as were situated in close proximity differed in that some of them were free from comma vegetation and others were infected. And in accordance with this the huts situated round the former were free from the disease while those round the latter produced cases of cholera. It is evident from what I have stated that the data bearing on the question under consideration which have been collected up to the present do not permit of establishing any connexion between the result of the laboratory investigation and the exact course which an epidemic of cholera is likely to take—viz., whether it is likely to decline or to increase. For this

purpose many researches into the prevalence of these comma-shaped micro-organisms in the water-supplies at the beginning of an epidemic, during the height of the epidemic, and during its defervescence would be required.

In conclusion, I have to bring to your notice the data contained in Table II.

TABLE II.

When or how often the wells were treated with permanganate.	Number of wells so treated.	Whether commas were absent or present.
The day before examination	One.	Present.
Two days before examination	Two.	Present in one; absent in one.
Regularly every day	Three.	Present in one; absent in two.
Twice a week	Six.	Absent in all.
Once a week	Five.	Present in two; absent in three.
Stated to have been treated repeatedly	Three.	Present in all.
Stated to have been treated with permanganate	Four.	Absent in all.
Had been treated only once	One.	Absent.
Had not been treated	One.	Present.
No information obtained	Seven.	Absent in six; present in one.

In this table the result as to the presence or absence of comma-curved bacteria in wells is put side by side with the information noted in my notebook as to the treatment with permanganate of potassium which the wells were stated to have undergone. The result is as follows: 1. Of the 25 wells, about which it is reported that they had been treated with permanganate, some more frequently and others less, eight contained commas. The 17 other wells treated were free. 2. In one well that had not been treated commas were found in numbers. Neither these facts nor the analysis of the connexion between the frequency of the treatment and the absence or otherwise of the commas, as shown in Table II., permit of drawing any definite conclusion as to the efficiency or otherwise of the permanganate process of treating infected waters.

Bombay.

WHEN TO OPERATE IN PERFORATIVE PERITONITIS.[1]

BY ARTHUR C. ROPER, F.R.C.S. EDIN.,
SURGEON TO THE ROYAL DEVON AND EXETER HOSPITAL.

I HAVE found during the last few years that considerable difference of opinion exists among us as to the occasions and the time for opening the abdomen in serious and sudden emergencies, and since I think it will be useful for us carefully to consider and to discuss the question I propose as a basis for such discussion to give you the main principles upon which my practice in such cases is founded. One paper would not suffice to deal with all the abdominal emergencies in which laparotomy is, according to modern surgical practice, demanded, so I propose to discuss in this paper one of the commonest, and therefore most important, clinical groups—viz., perforative peritonitis.

The diagnosis is the first important matter that we have to settle, and we must in many cases settle it quickly if we are to save our patient's life by operation. I remember a case of perforating ulcer of the duodenum in a patient of mine who died within 14 hours of the perforation without rallying in any proper sense of the word from the initial shock. The case occurred before the days when operation in these cases was generally practised, and the post-mortem examination showed that the ulcer was in an inaccessible situation at the back of the duodenum; but the point which I wish to press home is the extreme urgency of these cases and the fatal danger of delay. The diagnosis, then, has to be made and made at once if possible, so let us consider with what lesions perforative peritonitis—i.e., peritonitis caused by the rupture or ulceration, actual or potential, of some viscus or abscess into the peritoneum, and the diffusion of its contents over that sensitive lymphatic area—may be confounded.

Gall-stone and renal colic we must mention. We are not likely to confound them, although I have been in doubt about such cases. The onset is not very dissimilar, but in other respects the conditions have not much in common. Peritonitis non-perforative in origin is, of course, the chief crux, and here I find my surgical sense asking my medical conscience this question—"Do you really believe in a peritonitis which has its origin in a cause not remediable by surgical treatment?" and if you except the rare but well-known and easily recognisable cases which arise from a septic condition of the system such as those which occur in the course of scarlet fever, puerperal septicæmia, pelvic cellulitis, and the like, I must say that I do not. Tuberculous peritonitis may be named together with a ruptured hydatid, but both are more or less surgical conditions. I hear occasionally of peritonitis from exposure to chill, but I cannot honestly say that I believe in chill as a real and fundamental cause of the disease. There are many causes other than perforation, but most of them would be dealt with in a paper on intestinal obstruction, and they require consideration from the surgical point of view.

We are called, say, to a case of perforated gastric ulcer. We arrive soon after perforation has occurred and we find the patient in agony. Everything shows us that it is so and that the case is most serious. The patient's aspect is one of terror and expectancy—terror of the fearful pain which is every moment increasing in severity until it threatens to overwhelm sense and life. The terror-stricken look is that of shock—pallor, sweating, starting eyes, parted lips, and clenched teeth are all there. The pinched nose and sunken cheek give the facies abdominalis and afford you the first clue to your diagnosis. Is the sufferer rolling about in the bed? If so it is probably not peritonitis but a colic, intestinal, biliary, or renal. Patients with peritonitis keep their abdominal muscles very still. They may toss the arms about or roll the head in the restlessness of severe pain and collapse, but they do not move the abdomen. You will probably observe or hear that vomiting has occurred, and retching may be actually in process at the time of your visit. Too much stress must not be laid upon this symptom, because in perforation of the stomach, if the stomach is empty at the time there may be little or none, and even if a meal has been recently taken the first copious vomit rids it of its contents and the symptom ceases. Persistent vomiting is a symptom rather of intestinal obstruction than of perforation. The temperature is unimportant at this early stage, but it is most likely to be subnormal during the first few hours. You next feel the pulse, and it is the pulse of shock in a typical case—small and rapid—though I have seen cases where its pace has been scarcely at all accelerated. Then, if you have not already heard the story of the commencement of the attack you inquire and you find that it has been more or less sudden. There may have been a slight similar attack which passed off rapidly a short time previously, but if you have not been attending and guarding against such a catastrophe as has occurred you find that it has come on without warning. Possibly your patient has been sitting still or even asleep in bed, though more usually some slight exertion seems to have determined the attack. By this time you have a strong suspicion of peritonitis, and your mind then travels rapidly over the few viscera the perforation of which may have caused it—viz., the appendix, the stomach, the intestine, the gall-bladder, or, in a woman, the Fallopian tubes and ovaries. I have seen within the last three weeks two cases of pelvic cellulitis in which the onset of peritonitis exactly resembled that of perforation. To guide you further you put a few leading questions as to the organ from which the lesion originates. First, the appendix. Has there been any previous illness, with abdominal pain, constipation, and tenderness in the right iliac region? If so, how many attacks and at what intervals? Next the stomach. Any indigestion, flatulence, or pain after meals? If so at what interval after? Especially must inquiry about vomiting, hæmatemesis, and melæna be made. Thirdly, the intestines, which rarely perforate save in diarrhœa from typhoid fever or in tuberculous ulcer. Fourthly, the gall-bladder. Jaundice and gall-stone colic with tenderness.

[1] A paper read at a meeting of the Devon and Exeter Medico-Chirurgical Society on Feb. 15th, 1901.

Fifthly, the Fallopian tubes and ovaries. In this connexion you must think of ruptured tubal pregnancy which is remarkably like perforated gastric ulcer in its onset. Pyosalpinx, bursting into the peritoneum. Pelvic cellulitis I have already spoken of. In connexion with the ovaries you will inquire for the presence of a tumour which may have disappeared, for there may have been a ruptured cyst, or a suppurating cyst, or a cyst the pedicle of which has become twisted. Having obtained as much information as you can get or require without harassing your patient you proceed to examine the abdomen. Be careful to have it thoroughly exposed and in as good a light as possible. In the early stage of peritonitis you will almost certainly find that the abdominal respiratory movements are either greatly diminished or altogether absent and that there is rigidity of the abdominal muscles. There is no distension at this period, unless it pre-existed, but peristaltic movements may sometimes be seen. Palpation elicits in addition to the rigidity that the abdomen is tender, probably exquisitely so, but this depends in great measure on the ability of the patient to endure pain. Percussion, lightly performed because it is painful, will, if two or three hours have elapsed since the perforation, tell you that there is fluid in the flanks, a most important sign, and further it may furnish you with evidence of free gas in the abdomen by showing diminished liver dulness. If this free gas is clearly demonstrable it places the diagnosis of perforation of the stomach or intestine beyond reasonable doubt.

I have enumerated the four cardinal signs upon which I am accustomed to rely for my diagnosis of perforation in the early stage—i.e., for the first few hours after it has occurred: (1) rigidity, (2) tenderness, (3) presence of fluid, and (4) free gas in the peritoneum; and to these should be added, of course, the pain and signs of collapse. But before considering them and their significance in greater detail I will take you a little further with our supposititious case.

We will suppose that, for some good reason, either that you have been unable to attend immediately to the first summons or that you have sent for assistance, or that you are called in consultation upon the case several hours after the catastrophe—what will you probably find? A period of calm after the storm. The patient looking fairly comfortable, the pulse a little faster and small but not alarming, the temperature slightly above the normal, cessation of the vomiting, the agonising pain gone, and the patient expressing himself as feeling fairly comfortable and in a fair way to recovery. You examine the abdomen and what do you find? 1. Rigidity giving place to distension, but still there is immobility in respiration. 2. Tenderness still present, though in less degree and not so general. In an appendix case the localisation of the pain at this stage may be an invaluable guide. 3. Free fluid probably increased, though you must not forget that great distension of the intestines may obliterate the percussion dulness in the flanks by displacing the fluid. 4. You will probably find that neither fæces nor wind have passed per rectum. I have myself been deceived by this apparent extraordinary amelioration of the symptoms, and I have seen men of far greater experience than I can claim thoroughly taken in by it. But this period is the golden opportunity for operating, or even for removing a patient to a hospital or place suitable for operating in; and, while I personally should not deliberately wait for it as the elective period for operation, I should not, having made my diagnosis at an earlier stage, or seeing the case for the first time in this stage, when a competent man had earlier diagnosed perforation—I should not, I repeat, refuse to operate because the patient had apparently become so much better.

In the foregoing paragraph I have twice used the word "apparent" in connexion with the improved condition of our patient, and I think that if we spend a few minutes in considering the pathology of the symptoms we shall better see why the improvement is rather apparent than real. Let us first take the most obvious and to the patient most urgent, symptom, pain. What causes it? Do you at once exclaim, "Why of course the presence of foreign matter in the peritoneum"? To a certain extent I agree. I can well understand and realise that acid gastric juice and digestive ferments, especially when to them are added portions of solid food, would be an instantaneous cause of most terrible pain to the sensitive peritoneum. But how about the warm, creamy pus from a ruptured pyosalpinx? There is not at first sight anything so instantaneously pain-producing in this. It will in a short time produce peritonitis by inoculation with saprophytic germs, but the pain is instantaneous and severe; it suddenly doubles a man up when he is walking in the street, and he will describe the sensation of "something giving way in his inside." Again, the pain diminishes after the first severe bout, but the food particles are not absorbed. "They are diluted by the outpoured peritoneal fluid," you say. This will hold good as an argument when dealing with the gastric contents but not for the septic pus. Dilution will only serve to disseminate the latter. Time will not allow me to elaborate this interesting point, but I will just say that I think that the first shock of the irritating fluid from stomach or abscess causes a vaso-motor paralysis—immediate or spreading, dilatation of the peritoneal blood-vessels, and roughening from hyperæmia of the hitherto smooth endothelial surface, and that the pain is caused mainly by irregular peristalsis of the intestines in these altered conditions. Septic intoxication of the local nerve ganglia, assisted oftentimes by an opiate, then arises, and the period of rest supervenes because the peristalsis ceases. In other words, the intestines become paralysed; and the resulting inability to pass wind or fæces gives rise to a condition of obstruction. I should like to note in passing that this is often a cause of a mistake in diagnosis, because all medical men do not realise that peritonitis is a cause of paralysis of the bowel and so of obstruction. The bowel being paralysed is unable to carry on its peristaltic action, and with the cessation of movement you get cessation of pain. If this were all one would be inclined to say "very good" but the effect of the paralysis does not stop here. The bowel having lost its peristaltic movements has also lost its contractile power, and it stretches with the pressure of gases inside it, and so you get the condition of distension. Before this increasing distension the rigidity rapidly yields; if it did not so yield I suppose that the pain of distension would be considerable, and the displacement of the heart by the accumulating gases in the intestine might be rapidly fatal.

In such a case as I have pictured I have no hesitation in saying that the first thing you must do is to make your diagnosis, and then to give an anodyne. In perforating gastric ulcer you must give a hypodermic injection of morphia—a quarter of a grain is usually sufficient—to relieve the pain, to counteract shock, and to assist the patient as speedily as may be to the second stage. But in the meantime you must not be idle, you must prepare for the operation which is imperatively demanded. Send for your operator or your assistant, for your chloroformist and for a nurse, if the operation is to be performed at the patient's house. If such a course is inadvisable or impracticable you must arrange to have your patient removed as comfortably and as speedily as possible to a suitable place.

The case which I have just sketched is of the perforating gastric ulcer type, but there is another form of perforative peritonitis which is usually associated with the appendix and in which it is by no means so easy to come to a decision. The term "perforative" is used in the potential or future sense rather than in the past or perfect, and signifies threatening perforation. These cases have usually a history which is of great assistance in localising the seat of mischief, but as the appendix is usually the offending organ we will take such a case as a type. The illness begins with a well-marked sudden and severe pain, not by any means always referred to the right iliac fossa. It is quite as common in my experience for the pain to begin round the umbilicus, and so you may jump to a hasty conclusion that it is a case of intestinal colic. Again, the pain may be at the splenic flexure of the colon—a common place for "windy spasms" in dyspeptic, tea-drinking women. The symptoms may not be very severe to begin with and may develop more slowly, taking, it may be, some hours to arrive at their maximum. The pain will increase to the point of severity and you get the collapse. The pulse may be as bad as in the last case which we considered, but it may be only rather quicker and smaller than normal. The special abdominal signs—rigidity, absence of respiratory movements, and tenderness—will be present, and I need hardly say that in appendix cases you usually get, sooner or later, a particularly tender spot midway between the umbilicus and the iliac crest. Important evidence as to tenderness localised in the right iliac fossa is obtainable from a rectal examination, which should always, I think, be made in these cases. So far the case resembles an ordinary appendicitis, but let us suppose that the symptoms are severe all round, so that we have good reason to fear the formation of abscess. In these cases you also get the

second stage of rest, and in proportion as the first stage has been mild you will be likely to be deceived by the amelioration of symptoms at this time. Careful attention to the condition of the abdomen alone can save you from mistake. Here the temperature is of great importance, because the absorption of pus or of its toxins by the cellular tissue in and around the appendix causes a well-marked rise of temperature.

We have arrived, then, at suspecting the formation of pus in connexion with a perforated appendix. We only suspect pus. We have not yet got beyond the point where we can say definitely that the appendix is the seat of trouble. What we want to know is whether the appendix has perforated. Then, if so, whether it has perforated in a situation where adhesions will rapidly form and shut off the general peritoneal cavity, or thirdly, whether it has given way in a position which will speedily overwhelm the patient with a general septic peritonitis. These are points of supreme importance, because, in the first case, if no perforation has occurred and abscess is unlikely, it is better to let the attack subside and to remove the appendix when things have quieted down. Secondly, if the appendix is in its usual position, behind or to the outer side of the cæcum, an abscess may form, but local peritonitis will probably shut off and guard the general cavity from the dire effects of the foul pus. To find such an abscess in the early stage of its formation is by no means easy, and in seeking it one can easily destroy nature's barrier, and, with a small abscess of, say, two drachms in amount disperse it over the peritoneum in endeavouring to discover it; whereas if we allow it to increase to a considerable size we shall be able easily and satisfactorily to evacuate it. The third consideration which I have in my mind is fortunately the least common and is that in which the appendix runs inwards towards the middle line of the abdomen or over the pelvis. A long appendix one can picture hanging over the pelvis and almost dropping pus into the pelvic peritoneum.

Now how are we to decide in a given case as to which of these conditions is probably before us? I think that there are three things upon which we may rely with some sense of security. They are; (1) the condition of the patient—the pulse, the temperature, and the aspect; (2) the condition of the abdomen; and (3) the presence or absence of a swelling. We will leave the condition of the patient for a minute while we briefly consider the second and third signs.

The condition of the abdomen.—This has to be considered from the point of view as to whether distension has come on, and whether the peritonitis causing it is general or local. The former we can see at a glance, and we will suppose that the stage of rigidity has passed into that of distension. We shall lightly percuss the flanks to see whether there is dulness—i.e., fluid or exudation—and shall very likely find that there is impaired resonance if not actual dulness in the right flank from exudation, and that the left is tympanitic. If the left flank is also dull we shall know that the peritonitis is rather more than a local one and that fluid is accumulating in the general cavity—though I think that in appendix cases this is a rare condition. Because distension is general over the abdomen we must not necessarily infer that the peritonitis is also general or that the paralysis of the intestine is complete. We shall very likely find that on the left side pressure can be made with little or no pain, and we can infer from that that the peritonitis is not universal. Paralytic distension of the bowel is usually extended far beyond the site of the lesion or local peritonitis which causes it. If we hear gurgling or see peristaltic movements we shall know that paralysis in not complete, but we can do more than this. We can pass a rectal tube and see whether flatus escapes, or we can give a turpentine enema which may also serve the useful purpose of clearing out the rectum and sigmoid flexure. If we find then that contractile power is left in the bowel we infer that the general abdominal condition is not very bad at present.

The presence of a swelling in the right iliac fossa.—What constitutes the swelling in a case of appendicitis? First, the persistent rigidity of the muscles over an inflamed spot—rigidity which does not yield as readily or as rapidly as that over the rest of the abdomen. Deeper you have œdema of the transversalis fascia, of the omentum, and of the cæcum and adjoining intestine with matting together thereof. Indeed, all the cellular tissue of all the structures involved in the inflammation is infiltrated with lymph and serum, and being thus hardened and fixed gives rise to a palpable swelling. Now this swelling is a good sign, for it shows that nature is making a good fight and is putting barriers between the poisonous pus and the general peritoneal cavity. In a very few hours, probably before pus will have had time to form, nature will have made the passage to the abdomen impregnable to its assaults. As a rule, then, the presence of a definite tumour without distinct signs of pus in it relieves our minds of pressing anxiety. We must assiduously watch the pulse and temperature, in four-hourly observations if such can be arranged for, because although we are tolerably (though not entirely) free from the danger of pus entering the peritoneal cavity, we have to recollect that the pus in these cases is very fœtid and very virulent and may soon destroy not only the appendix (that is not much loss) but even adjacent bowel, as I have seen in more than one case which has been left too long unopened.

The condition of the patient.—This is the principal and important point upon which we have to form an opinion based almost entirely upon our own experience. The second and third signs are purely objective and can be seen or discovered with ordinary care by the merest tyro, but experience and ripe judgment are needed to decide whether the patient is suffering from a septic peritonitis which will very soon kill him, or whether he has a local condition which he can easily last through for some days and finally recover from when the appendicitis resolves or the local abscess is opened. It is most difficult to convey to others the points, minutely balanced *pro* and *con*, with the reservations which one has in one's own mind in considering such a case, and were I to attempt the task I should, I fear, only obscure the subject of our discussion. I will, therefore, put it broadly into two types, the sthenic and asthenic.

The sthenic you can afford to watch. The patient's face is possibly flushed, he is alert, and gives you the impression of reserved strength, but he has no delirium. Delirium in surgery is a danger-signal of grave significance. The pulse may be fast, and even small, from the contracted artery of peritonitis, but it is in accord with the temperature, which is high, say, 103° or 104° F., and has power and tension. In such a case you can, I say, afford to wait, especially if the distension is not alarming and you can feel a distinct swelling. But you must have a very clear idea as to what you are waiting for. You are waiting for one of two things, either the resolution of the inflammation without abscess or the earliest possible moment when you can safely evacuate the pus, the presence of which you have diagnosed and the potency of which for ill you dread—pus which you have diagnosed either from the temperature chart, from a rigor, from a local œdema of the skin, or from the presence of fluctuation in the swelling. I say the earliest possible moment, because I recently saw a case most severe in all its stages in which the patient and his friends absolutely refused me permission to operate in the earlier stages and I did not consider it a case to press. I diagnosed and localised the abscess and said that it should be evacuated; indeed, I offered to see the case the next day and to do the operation. Early the next morning the abscess burst into the peritoneal cavity and the man died. The diagnosis and course of the case were verified post mortem. Now, I believe that if I had insisted more strongly upon the immediate danger that the abscess was to his life I might have overcome their repugnance to the operation which I knew and declared to be necessary. But it seemed to me to be so certain that it would be soon pointing over the iliac crest that the idea of its finding its way into the peritoneum hardly crossed my mind. I hope that I have learned that lesson. One word more on the sthenic type. If you are watching such a case and the temperature suddenly falls without a corresponding improvement in the pulse you should decide on immediate operation, as it probably indicates a sloughing of the appendix at least and may mean something more serious.

The asthenic type is the last that we have to consider and is the most dangerous as well as the most difficult to decide upon. I am not referring to cases which are moribund when you first see them—cases in which pain has been deadened by repeated opiates and which have been allowed to drift through the first and second stages until the patients are all but dead from septicæmia and with probably multiple septic abscesses in the liver; cases in which blue lips and fingers with a thready, rapid, or uncountable pulse tell that dissolution is imminent. Operation can do no good in such a case; it will only hasten the inevitable termination. In such a case you can only try with heart-stimulants,

strychnine, brandy, and the like to restore the circulation to a point at which you might be justified in operating; but if, as is probable, your efforts in this direction fail you must not discredit surgery by doing a useless operation. In such a condition I doubt whether one is justified—nay, I do not think that one is—in subjecting the patient even to the examination necessary to found a diagnosis upon. No; the type of which I speak is that in which there is evidently profound disturbance. The complexion is pale or sallow, the pulse is rapid, small, and compressible, and the temperature is only slightly raised—not at all the temperature which one likes to see with the quick pulse. Or, again, the pulse and the temperature may neither of them be much increased, but still the patient, who has the history of appendix trouble and the abdomen of peritonitis, is evidently suffering from profound septic poisoning. In such a case you at once look for the swelling, and if you find it, you may conclude—particularly if it is known to have been present for a day or two, and the patient is at the end of the first week of his disease—that there is an abscess which is doing damage, that the appendix has sloughed or is sloughing, and that the abscess is dangerously near to perforating, even if it has not already done so, the peritoneal cavity. If you come to this conclusion you will of course arrange for immediate operation. But, you may not always have the help of finding the swelling, either because it is so slight as to be unrecognisable or the abdominal distension is so great as to mask it. I want you clearly to understand the situation. A patient with a history of appendicitis with symptoms of severe septicæmia of a low type evidently dangerously ill, the abdomen swollen but not very tender, and no swelling in the right iliac fossa that you can detect. What is to be done? Well, first, if it is a woman make quite sure that it is not pelvic peritonitis arising from pelvic cellulitis. I have quite recently seen a case, and can recall another, in which a vaginal examination saved the situation so far as I was concerned, and the patients went through their attacks satisfactorily. Having satisfied yourself that this is not present I think that an operation should be done to discover whether there is pus in the abdomen in connexion with the appendix or Fallopian tube. The operation is difficult and the prognosis is doubtful, but the risk of the operation is less than that of letting the patient run on to almost certain death. These cases are fortunately rare and are usually connected with an appendix which is tucked away behind the cæcum or colon or to the inner side of them and are due to the insufficient protection of the abdominal cavity by adhesions, so that a larger portion of the peritoneum is exposed to septic infection than is compatible with life.

I have indicated, I think, the conditions in which I should operate, but before concluding I should like to say a word about the propriety of refraining from operating during the condition of profound shock which often obtains at the onset of these cases. The condition is purely one of shock, because the history will tell you that the patient has only been ill for an hour or two. If I find a patient in this condition of shock and with a very rapid pulse—130 and upwards—I prefer not to add to the shock of the disease by the shock of an operation. The patient has, in my opinion, a better chance of recovery if you first rally him with strychnine, brandy, and a dose of opium. It is bad surgery to wait in a case of perforated gastric ulcer unless you have strong reasons for doing so, and I can think of no other reason than this that would make me delay. You can, as I have said earlier, utilise the time of waiting by preparing for the operation, and probably by the time that you have everything ready the pulse will have improved sufficiently for you to feel happy in carrying out the treatment that is so urgently needed.

A word in conclusion about opiates. To relieve the agonising pain at the beginning of the attack—and we must remember that the pain enhances the shock—an opiate is usually necessary; but if persisted with—if, that is to say, we keep the patient under the influence of opium—we obscure the diagnosis and increase the distension. I dislike morphia for the latter reason, I always think that it is more of a bowel paralyser than opium. If possible make your diagnosis before you give an opiate; if you cannot, then give the opiate and see the patient again in from four to six hours (in the case of suspected gastric perforation four hours is too long) and again try your best to make sure of the seat of trouble. You will then be able to ascertain for yourself whether more opium is necessary, and, if pain demands it, you can order another dose; but you will have had the advantage of observing the developed abdominal condition when the patient has more or less thrown off the effect of your first dose. You will be doing the right thing by your patient and yourself if you insist on no opiate being given, except in your presence, until you have arrived at your diagnosis.

Exeter.

RECURRING ATTACKS OF CATALEPSY ALTERNATING WITH VIOLENT MENTAL EXCITEMENT.

BY W. G. STONE, M.A., M.D. OXON., F.R.C.S. ENG.

THE patient whose symptoms are here described has been known to me since Nov. 15th, 1900. She is a tall, thin woman, aged 27 years, married, but without children. She consulted me with regard to intense headache, from which she had been suffering for the two previous nights, the pain being situated in the supra-orbital and occipital regions. She told me that it came on about 3 A.M., that she was sick two or three hours later, and that she was free from pain but exhausted by 10 A.M. She had had one similar attack about six weeks earlier. She also mentioned at this time that she was subject to temporary attacks of dimness of vision and that she had noticed the great size of the pupils at such times. There were no symptoms suggestive of increased tension and no ocular error could be detected at the time of her visit.

With regard to her family history, her mother, who is known to me, is subject to very violent attacks of temper, so severe, indeed, as to make her home almost uninhabitable to her husband and children. In her ordinary life she is quiet and pleasant, but when excited she loses all control of herself, using the most abusive language, and seeming for the time to be really dangerous. She has, however, never suffered from definite delusions of any kind, nor has she shown much evidence of hysteria of a milder form. In other members of the family there is no record of nervous troubles that I can discover.

As to the personal history, the daughter is usually of a bright and lively disposition; she is fond of amusement and is very happy in her home life. She is not liable to sudden fits of crying or any of the milder hysterical outbreaks. Her first mental symptoms appeared after her marriage, which occurred three years ago. One night, while staying at Ventnor for her honeymoon, she became violently and ungovernably excited and remained in this condition for three hours. Since that time the excitement had been apt to recur at or after the menstrual periods, and I am told that at such times she "wandered in her mind"; she had been heard by her husband to mutter "I must do it," and had twice been seen by him "looking for a razor." She also had spoken of a wish to destroy herself. The menstrual loss was excessive, lasting for fully a week; and it had usually been accompanied on the second day by great pain as well as by vomiting. She obtained considerable temporary benefit from a prolonged course of ergot in 1898, and the decrease of menorrhagia was accompanied by a decrease of mental symptoms. Six months after her marriage she had a prolonged febrile illness which was diagnosed with some hesitation as enteric fever; in this the mental symptoms were very pronounced and there was great insomnia.

When first seen by me she was anæmic and very thin but without positive signs of disease except the menorrhagia already mentioned. The temperature was normal; the tongue was fairly clear and moist, though she had much constipation. The heart sounds were normal; the pulse was small and rather tense but regular; the lungs were normal; sensation, muscular power, smell, taste, and hearing were unaffected. The knee-jerks were present. There were no tremors and no giddiness; the pupils reacted to light and accommodation; the movements of the eyeballs were normal. There were no ovarian tenderness and no tenderness along the spine. The urine was normal. The appetite was poor, especially during the daytime, when she took her meals alone. On Nov. 24th she again came to me complaining of headache. She was at the end of a menstrual

period, during the whole of which her headache had persisted; the period had lasted eight days, but the loss had been less than usual. She seemed to improve for a day or two and the catamenia ceased, but a season of intense mental excitement then ensued. It lasted for two days and for that time sleep was quite absent. She could converse and argue with those about her but did not recognise them. On recovering two days later she found that she had no recollection of the interim. "She had lost two whole days," as she said. I saw her several times while in this condition. On the first occasion she was excited when I arrived—struggling violently to get out of bed, tearing her hair, and striking her head with her hands or knocking them violently against the rails at the head of the bed. Then she would fall back, seemingly exhausted, but suddenly would leave this condition to sing, in the manner of Ophelia, little snatches of song. She did not know me at all and was indignant that her medical attendant had not come as he promised. I said that I was he, but she replied, "I know you're not: he would not have been so rude." Then she added, spasmodically: "Your hair's all rough; you might have brushed your hair"; and then began struggling violently to get out of bed. But she had no other definite delusions; she did not, at any rate, imagine that she saw or heard more than the rest of us. All this time she complained of throbbing pain on the top of her head. An ice-bag gave some relief to it, but still she got no sleep. Bromide of potassium with chloral hydrate were given in the evening without effect; also on another occasion caffeine and phenacetin, and a third time inhalation of amyl nitrite. Some benefit was apparently derived from a mixture containing valerian with spiritus ætheris co. During the two days of excitement she was constipated, with a dry, furred tongue, and very thirsty, but with a normal temperature. Nothing excited her more than the proposal to have a nurse in attendance, and she threatened to do her serious bodily harm "if one of those frillicaps was brought." In two days' time the excitement subsided and she had some very good sleep, awaking, as has been mentioned, without any recollection of the last 48 hours. This was on Nov. 30th. She improved during the next fortnight and kept her bed during the whole of the next monthly period. This passed without violent excitement. There was some pain, but less than usual; the period lasted a little over a week, and 18 diapers were used. One day she passed a membranous cast of the uterine cavity and said that the same thing had also occurred some months previously. As this suggested a cause for her dysmenorrhœa, menorrhagia, and sterility, a vaginal examination was advised when the period had been followed by a fortnight of fair health. It was then that a definite cataleptic condition was first observed, but there was reason to suspect that the faints reported by her friends during the two days of excitement might have been in reality cataleptic seizures.

The vaginal examination took place on Jan. 1st, 1901. She had felt nervous on the morning of that day and had taken a dose of the valerian mixture of her own accord. A bimanual examination was made in the dorsal position with only moderate struggling, but on the attempt to introduce a speculum she became violently excited and it was at once evident that the attempt must be abandoned. She tore her hair, struggled terrifically, and cried out, "You have made me mad," "I am a mad woman," shrieking again and again. Some valerian was administered with difficulty and then the cheek was sharply slapped with a wet towel. Upon this she fell back and her friends said that she "had fainted again." She lay unconscious, but with her eyes open, fixed, and slightly turned upwards. She was slightly pale, her mouth was half opened, she breathed quietly, but rather shallowly, and the pulse was soft but not weak, with a rate of about 80; the reflexes were not examined. The limbs were found to be in a typical condition of flexibilitas cerea. There was scarcely any resistance or stiffness when the joints were moved, but the limbs remained just as they were placed, though they felt so plastic and unresisting that I thought they would drop at once when let go. I first raised each arm and left it in this posture; then I flexed all the joints, shoulder, elbow, wrist, and fingers, and they stayed flexed; then I straightened each joint separately; and lastly put the arm so that it formed an angle of 30° with the surface of the bed, when gravity would have every advantage over the supporting muscles. In no case was there any feeling of rigidity, but in every case the arm stayed as it was placed. The same was then found to be true of all the joints of each leg, and lastly, I put the patient in a sitting position and she remained sitting upright, while the head was bent first to the right, then to the left, then right back so that the face looked towards the ceiling, and finally bowed forward. On each occasion the forced position was maintained by the patient's muscles, though she remained completely unconscious. After about seven minutes the cataleptic state was succeeded by a period of renewed excitement. She again struggled maniacally, and then would laugh or scream or sing short snatches of song. This ceased as before on the cheek being slapped repeatedly with a wet towel, but only to be followed by another shorter cataleptic attack similar to the former one. As this passed away she gradually regained her natural consciousness, though still showing occasional tendency to excitement. In the evening she was quite herself and remembered little of what had occurred. She regretted that the examination had been incomplete and a few days later decided to submit to examination under an anæsthetic. This was accomplished shortly after the next menstrual period. Gas and ether were administered; the uterus was dilated and curetted; and, under careful nursing, the time following the return of consciousness was passed without any hysterical manifestation. She has since had two normal periods and is now gaining strength and weight, suffering but slightly from headache and quite free from any form of violent nervous excitement.

Denmark-hill, S.E.

ON THE CAUSATION AND TREATMENT OF PROFUSE EPISTAXIS IN PEOPLE BEYOND MIDDLE AGE.

BY GEORGE COATES, M.A., M.D. OXON., M.R.C.S. ENG.

I HAVE had a very interesting series of five cases of profuse epistaxis not caused by a blow or injury but coming on without any apparent cause in adults aged 50 years and upwards, all of whom I have known and watched for several years both before and after the attack, and in whom I have been able to trace the series of events which caused and followed it. The attacks have been sudden in their onset, and profuse, generally lasting from half an hour to an hour or more, and tending to recur for several days. The cases are briefly as follows:—

CASE 1.—The patient was a gouty man. He had had a severe attack of epistaxis 17 years ago, which was finally stopped by plugging the posterior nares in the usual manner. At the same time he developed cardiac disease, i.e., well-marked mitral regurgitation. He died 15 years later, aged 82 years, from bronchitis and pneumonia. There was some chronic nephritis.

CASE 2.—The patient was a woman, aged 52 years. She had had profuse epistaxis seven years ago, which also was finally stopped by plugging the posterior nares. She developed mitral regurgitation at the same time. She is now alive and well.

CASE 3.—The patient was a man, aged 68 years. He had epistaxis four years ago. He developed aortic regurgitation at the same time. He was treated with blue pill and a mixture of sulphate of quinine and sulphate of magnesia and rest in bed. Plugging was not necessary.

CASE 4.—The patient in this case was a woman, aged 64 years, who had suffered for at least 10 years from high arterial tension.

CASE 5.—The patient was a woman, aged 68 years, who had suffered for several years from high arterial tension due to arterio-capillary fibrosis and from contracted granular kidney.

With the exception of the patient in Case 1 all the others are now alive. In Case 4 and Case 5 the patients did not develop any valvular lesion. The epistaxis in both of these followed exposure to cold when they were very tired; they both had over-exerted themselves for many days and then got thoroughly chilled. In both, the epistaxis was cured by administering nitro-glycerine and tincture of strophanthus.

In all these cases the sequence of events which led up to the epistaxis was essentially the same, namely:—

(*a*) Long-continued high arterial pressure. (*b*) Some sudden cardiac failure. In Cases 1, 2, and 3 the

epistaxis arose from the giving way of a valve. In Case 4 and Case 5 it arose from loss of power of the cardiac wall. (*c*) Over-filling of the whole venous system, the weakened heart not being able sufficiently to empty the engorged veins against the high pressure in the arterial system due to contracted arterioles. (*d*) Leakage from an over-filled vein. In Cases 1, 2, and 3, in which the patients all had a good amount of muscular strength and vigour, the heart had gone on working against this high pressure until a valve, aortic or mitral, gave way. This, of course, diminished the efficacy of the heart as a pump but did not diminish the contraction of the arterioles. Hence followed a sudden change in the circulation of the blood and an increase of blood-pressure in the veins to such an extent that nature gave relief by a copious epistaxis. Although the presence of the valvular murmur was noted at the time and I was surprised to find it as a new feature in each case, yet it was not recognised that the alteration in the circulation which produced the murmur was the cause of the epistaxis. In Case 4 and Case 5 there was not enough vigour of constitution in the patients for the heart to be sufficiently strong to raise the arterial pressure high enough to cause valvular leakage. In them, however, the same state of venous engorgement was produced in the following manner. They had both overexerted themselves and felt very tired for some days, then when exposure to cold constricted their superficial vessels such a sudden increase of work was thrown on the heart that the tired muscle was no longer able to do its work efficiently. Here again the veins became over-filled and epistaxis occurred. Both these last cases were caused by the same spell of cold weather and various remedies as suggested in the various text-books were tried with little result. When seeing the patient in Case 4 the thought occurred, Why not try to relax the arteries and strengthen the heart so as to get the veins emptied naturally? Nitro-glycerine was given and was perfectly successful; as soon as the smaller arteries were sufficiently dilated the bleeding stopped. In Case 5, a short time later, the same treatment was adopted and the same result followed. The patients were both kept slightly under the influence of nitro-glycerine for some days and tincture of strophanthus was given as well. A few weeks ago No. 2 was in a poor state of health and began to suffer again from epistaxis. She was at once put on nitro-glycerine and small doses of strychnine, with the result that the epistaxis ceased and did not recur. These cases, taken together, form a suggestive series and appear to lead to an obvious conclusion and I think that the result of the treatment in Cases 2, 4, and 5 shows that the theory is correct.

There has been the difference in the subsequent history of these people that one would expect. In Cases 1, 2, and 3 the patients had sufficient vigour for the muscular wall of the heart to hypertrophy until it became able to do its work. In these the circulation resumed its equilibrium and they have had either no further attacks of epistaxis or only very slight ones. In Case 5, where the patient has been suffering from ill-health for years and in whom there is no cardiac hypertrophy, any exposure to cold is apt to bring on epistaxis, but she can always stop it by taking a one-hundredth of a grain nitro-glycerine tabloid. The patient in Case 4 is worth noting as a very anæmic old lady. In her case the epistaxis was certainly not caused by plethora but only by a faulty distribution of the blood. I do not wish in the least to assert that all cases of epistaxis in the aged are due to the same cause, but only that there is a well-marked group in which profuse epistaxis is an outward and visible sign of sudden temporary loss of power of the heart. In these cases the hæmorrhage is purely passive and it is exactly analogous to the attacks of hæmorrhage in elderly persons which may come from the lungs in cases of a suddenly rising mitral disease, from the stomach if the heart should fail in cases of cirrhosis of the liver, or from the uterus (as menorrhagia) in cases of mitral regurgitation, &c.

Here the questions naturally arise, Why should only some people with this condition of circulation suffer from epistaxis? Why should the block not show itself rather by pulmonary symptoms than by hæmorrhage from the nose? The only answer is that in some cases pulmonary symptoms do occur in apparently similar conditions. Of course the hæmorrhage occurs from the relatively weakest point and it is probable that the venous sinuses in the noses of these sufferers from epistaxis have very thin walls. Another possibility is that the question, whether lung trouble arises or not under these conditions, depends on the relative strength of the walls of the two ventricles. If the weakened left ventricle be still able to pump out of the lungs as much blood as the right ventricle can pump into them, naturally no pulmonary congestion can exist, and the block in the circulation must be behind the heart. If, on the other hand, the left ventricle be relatively weaker than the right the lungs become congested with blood, and according to the degree of congestion we may get hæmoptysis, or more or less œdema of lungs, or the condition where the physical signs are those of a bronchitis mainly basic but in which the expectoration is a tenacious glairy fluid, which may be transparent or may be coloured with blood, its hue varying from a light pink or, in the graver cases, to prune-juice. Or we may get symptoms of asthma of varying intensity and this form of asthma is curable also by nitro-glycerine.

The most scientific and satisfactory treatment of these cases of epistaxis, and by analogy of the other forms of passive venous hæmorrhage, is to empty the over-filled veins. As long as they are enormously distended with blood the hæmorrhage must continue unless direct mechanical means are used, and if one nostril be plugged the epistaxis is apt to start from the other. If, on the contrary, we can relax the walls of the arteries and help the enfeebled heart to do its work, it will soon empty the over-filled veins. But, as a rule, this cannot be done by giving heart tonics at first. The heart has been doing its utmost, it has only failed because it has been overworked, and giving a tonic is like spurring a jaded horse. We must bear in mind that in this class of cases the immediate treatment must be directed to the capillaries and small arteries, as the real cause of the epistaxis lies there, not in the nose. Nitro-glycerine is quite effective, nitrite of amyl might be more so, but one of the more quickly acting nitrites should be used at first; afterwards one of the more slowly acting as erythrol tetranitrite or possibly even thyroid tabloids might do as well. When the capillaries and arterioles are dilated and pervious then comes the time for strychnine or strophanthus. Of course each patient must be considered individually, and there are other ways of keeping down excessive blood-pressure and strengthening a weak heart. In spite of everything plugging may have to be resorted to in some cases, but in most of them the hæmorrhage can be stopped without resorting to this procedure, which is always most uncomfortable to the patient and sometimes even dangerous.

Finally, by recognising profuse epistaxis as a symptom of a sudden though mostly temporary heart-failure, there is no danger of commencing valvular disease being overlooked and the patient being considered as one who only requires a little surgical treatment. In some cases it is possible that the alteration in the circulation causing the epistaxis may also cause cerebral symptoms, but here, again, the cerebral symptoms are mostly not the cause or the result of the epistaxis but only the result of the circulatory conditions leading to the epistaxis.

Brechin-place, S.W.

A CASE OF RECOVERY AFTER OPERATION FOR DIFFUSE PERITONITIS FROM PERFORATION OF THE APPENDIX.[1]

BY CHARLES A. MORTON, F.R.C.S. ENG.,

PROFESSOR OF SURGERY IN UNIVERSITY COLLEGE, BRISTOL; SURGEON TO THE BRISTOL GENERAL HOSPITAL AND TO THE BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.

I THINK it would be well at once to define the nature of the case which I now report, and have called one of "diffuse peritonitis." Many such cases have been recorded as recoveries from general peritonitis, but when the records are read it is obvious that, although the infection was widespread, there was no evidence at the operation that the disease involved the whole, or in some cases even the greater part, of the peritoneal cavity. These cases are examples of an infection of considerable extent, an infection far beyond the limits of a localised collection of pus around the appendix, but they are not cases of general infection. To this class my own case, I

[1] A paper read before the Bristol Medico-Chirurgical Society on March 14th, 1901.

believe, belongs. I know from what we found at the operation that the infection was widespread, but I think that it is doubtful if it involved the upper part of the peritoneal cavity. The recovery of the patient is, I think, evidence that it probably did not do so. When the great disappointment which is often experienced after trying to save a case of widespread infection of the peritoneal cavity, from perforation or gangrene of the appendix, by operation, is borne in mind, it seems to me worth while recording successful cases, as an encouragement to operate if the opportunity presents itself early enough. This case appears to me to teach a lesson well worth learning, and that is that operation in recurrent cases cannot always safely be postponed until the quiescent period. We cannot feel assured that because a patient has had several attacks of appendicitis the appendix must therefore be safely buried in adhesions and the risk of infection of the surrounding peritoneum almost *nil*. My case is an instance of a most serious infection of the peritoneal cavity in the fourth attack of appendicitis, and I have collected a considerable number of cases of such serious infection in recurrent attacks. The case is also of interest as an illustration of the fact that serious infection of the peritoneum may be present and yet the general condition of the patient be remarkably good. These are just the cases in which an early operation is attended with the best results, for the patient is saved from the gravest possible danger and the operation is performed at a time when his strength is well equal to it.

The patient was a man, aged 44 years. He woke up on the morning of Dec. 4th, 1900, with some slight abdominal discomfort, and during a journey of several hours to Bristol in the morning the pain became severe. It was present in the right iliac fossa, but also darted up and down the right side of the abdomen in the line of the right rectus muscle. He did not vomit. He was seen by Dr. Barrett Roue in the afternoon and I saw him with Dr. Roue in the evening. His pain had then been a little relieved by opium. His pulse was only 80 and the temperature was under 100° F. The abdomen was very little if at all distended, but the right side was rigid. It was only tender over a small area just inside the right anterior superior spine. There was a normal amount of abdominal breathing. No swelling was present. There was a history of three previous attacks, one in July, another in August, and a third in October. The diagnosis of appendicitis seemed clear and as there had been three previous attacks I thought we might safely watch the case. On the following day (the 5th) the patient complained of pain in a very unusual position—the left side of the perineum and in the penis, and he said that it started in the right hypochondriac region and spread down the line of the right rectus muscle into these parts. The abdomen was somewhat distended and also slightly rigid and tender on the left side as well as on the right. He had no vomiting, although he was taking a fair amount of milk. Only one-sixth of a grain of morphia had been given hypodermically on the previous evening. On the next morning (the 6th)—that is, 48 hours from the commencement of the attack—there were more abdominal distension and more general tenderness and the abdominal breathing had disappeared. Although the pulse was only 80 and the temperature was below 100° and the patient showed no sign of prostration I decided to operate as the increasing general distension and tenderness seemed to be unsatisfactory signs. Not that general distension alone is a certain sign of widespread peritoneal infection in these cases, for in some of my cases of appendicitis in which it has been marked the disease was strictly limited to the appendix.

I opened the abdomen over the region of the appendix and found what I have observed in other cases of intraperitoneal suppuration, very marked œdema of the connective tissue just beneath the external oblique aponeurosis. On dividing the peritoneum a very red and distended cæcum presented and from beneath this I evacuated a small collection of pus which was only retained there by the pressure of surrounding distended coils of intestine. I next passed a sponge on a holder down into the true pelvis, and on withdrawing it a large quantity of thick pus escaped from the pelvis, which was then thoroughly sponged out. All the coils of intestine which presented in the wound were very red and had exudation of lymph on them. The appendix was perforated close to its attachment to the cæcum, and I removed it. It was almost free from adhesions. A very long glass drainage-tube was placed in the pelvis, another in the right loin, and a small one against the stump of the appendix, and gauze wicks were placed in the tubes. There was no shock from the operation, but I must say that the condition of the peritoneum was so bad that I did not expect the patient to recover. In spite of my fears, however, he began to improve from the time of the operation; flatus was passed and the abdominal distension slowly subsided. He was fed only by the bowel for the first 48 hours, and occasionally turpentine enemata were given. Only serum drained away from the tubes, but this came in considerable quantity at first, though the quantity soon diminished, and a few days after the operation the glass tubes were changed for rubber ones. He never had very much pain after the operation and had no vomiting at any time during his illness. Ten days after the operation the abdomen was soft and of natural shape and he was taking fish and other kinds of solid food. All the rubber tubes were removed five days after the operation, but on the following day for the first time a little pus was discharged from the drainage-tube track leading to the stump of the appendix. As the discharge continued a very small drainage-tube was inserted into the track and a slight discharge persisted for a fortnight and then the sinus healed. The patient made a satisfactory convalescence and has since remained quite well.

I think the record of this case will show how dangerous a recurrent case of appendicitis may be, and that severe peritoneal infection may be present with a pulse hardly raised above normal, a very slight rise of temperature, and a complete absence of vomiting and of those signs of general prostration which are so frequently associated with septic peritonitis. I hope that by adding one more to the list of recorded successful cases of operation I may give some further encouragement to operate for septic peritonitis if the patient is seen early enough.

Bristol.

THE OPEN-AIR TREATMENT OF PHTHISIS AT HOME:

A SHORT HISTORY OF A CASE.

BY F. WHINFIELD BARTLETT, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient, aged 38 years, the wife of a baker residing on his business premises in the country, two miles from a small town, had, before coming under my care, been treated by my predecessor for phthisis. During the years 1897, 1898, and 1899, she consulted me on several occasions for attacks of pleurisy on the left side. During the winter months she suffered much from cough and shortness of breath. There were well-marked physical signs of consolidation in the upper lobe of the left lung, with a cavity at the apex. In the intervals between the pleuritic attacks she felt well enough to perform her ordinary household duties and continued to do so until the onset of more acute symptoms in January, 1900. There was no history of tuberculous disease on her father's or her mother's side, but her only child, a boy, aged nine years, had suffered from tuberculous disease of the knee-joint, for which I had amputated through the thigh in September, 1899. He has never developed any pulmonary symptoms.

On Jan. 8th, 1900, I was called to the patient's house and found her in bed. She had been shivering, the pulse and respiration were both very rapid, the temperature was 102°F., and there were much cough and expectoration. These symptoms continued to be very acute for a fortnight, then they gradually remitted until in the first week in February her condition was as follows. The body was considerably wasted (her weight was 89 lb.), her evening temperature averaged 100·6°; there was considerable dyspnœa; respirations were from 30 to 40 per minute; there were severe night-sweats and much cough with expectoration of large quantities of viscid mucus (this had declined from four or five ounces to about two ounces per diem), sometimes muco-purulent and always containing "nummuli" and sometimes streaked with blood. There was much bodily weakness with anorexia and great restlessness and nervous irritability. With regard to physical signs there were marked flattening and deficiency of respiratory movement on the left side; the left clavicular note was quite dull; the percussion note was quite dull at the apex and was markedly impaired

over the whole of the remainder of the left lung, front and back; the breath-sounds were cavernous at the left apex with very distinct bronchophony and pectoriloquy and much coarse metallic râle. The breathing became bronchial in the axillary region and faded to a weak respiratory murmur over the base, where also pleuritic friction sounds were to be heard. There were also signs of commencing disease of the right apex. A specimen of the sputum was sent to the Clinical Research Association for examination, and the report was that "tubercle bacilli are present in small numbers."

As the prospect of the patient's recovery seemed to be under ordinary conditions very slight I advised that she should undergo the open-air treatment. To this she and her friends willingly consented, but as residence in a sanatorium was out of the question, I persuaded them, being influenced by the account of a very successful case reported by Mr. T. A. Somerville and Dr. Eugene S. Yonge,[1] to carry out the treatment at home. For this purpose a shepherd's van which happened to be on the premises was moved into the garden at the rear of the house. The side of the van facing south was removed and rebuilt to the height of three feet six inches from the floor, leaving a space of four feet between it and the roof the whole length of the van, provided with shutters for use in stormy weather. A small stove with a flue was placed in the van for the sake of comfort, and the patient then took up her residence there. The season was winter (she commenced the treatment on Feb. 7th) but she spent the whole of the time between breakfast and sunset lying on a couch or sometimes sitting in an easy-chair in this situation with the exception of half an hour for dinner in the middle of the day, when she went in-doors. Whilst in-doors—in her sitting-room in the evening and in her bedroom at night—the window was always kept wide open, a screen being placed between the window and the bed to prevent any draught being felt. Although the other occupants of the house complained of the cold and discomfort she herself felt no inconvenience even in the coldest weather. Occasionally, in very stormy weather she would remain in-doors for a day or two, wind and a damp atmosphere apparently causing laryngeal catarrh, whilst a cold dry air had no such effect. When the weather was favourable she took short walks. She was enjoined to take a liberal diet, but her distaste for food was such that she could never take much meat or solid food of any sort. Her usual daily menu was three pints of milk, one egg, a little bacon (at breakfast), a few thin slices of bread-and-butter, occasionally a little meat and vegetable, and, in the winter months, a plate of oatmeal porridge with milk for supper. During the first three or four months of treatment she took a capsule containing one minim of creasote three times a day. She also used inhalations of terebene several times daily, and frequently took an anodyne cough mixture. I visited the patient twice a week during the first few months of treatment, and afterwards at gradually lengthening intervals. She kept a daily record of her morning and evening temperature and a weekly record of her weight. Within a week or two of her taking up her out-of-door residence her condition began to improve—the cough diminished in frequency and the sputum in amount, the evening temperature fell to below 100°, and she commenced to gain in weight. In the first seven weeks she gained 7 lb.; then her weight remained practically stationary for two months. During this period the evening temperature averaged about one degree above normal. In April she had a slight relapse; the temperature rose to 101° (for a few days it was 102°), there were considerable prostration and nervous irritability, and she was much troubled with laryngeal hoarseness and cough, so that I deemed it advisable that she should remain indoors and in bed. Under the influence of rest and warm inhalations of compound tincture of benzoin the symptoms subsided and in a week or two she was able to resume her out-of-door life. After this, with the exception of a second slight relapse in May, the improvement was gradual but continuous.

The record shows that the fall in temperature and the gain in body-weight proceeded *pari passu*. By the beginning of August the evening temperature had fallen to normal and has never once since risen above it. Her weight at that time had risen to 102 lb.; by the end of the year it had increased to 114 lb., at which it remained at the beginning of February, 1901. The improvement in her condition at this time, 12 months after the commencement of the treatment, is very marked. In place of being a fragile, cachectic woman with sunken cheeks and a hectic flush she is now plump and well-conditioned, with a healthy complexion; in fact, she complains of being uncomfortably stout. Cough and expectoration have almost disappeared—she coughs a few times in the course of the day and occasionally expectorates a little mucus which is never blood-stained. She has had no night-sweats for many months, no hoarseness, and no pleuritic pain. As to the physical signs, there are flattening and deficiency of expansion of the chest-wall on the left side, the percussion note is dull at the apex and impaired at the base, whilst there are still tubular breathing, bronchophony, and pectoriloquy at the apex, and the breath-sounds are weak at the base. The loud metallic râle which was so audible at the apex has disappeared and there is now only a faint crepitus at the extreme end of inspiration, whilst the crepitation at the base is much less in amount and pleuritic friction is absent. The signs of commencing disease of the right apex have disappeared. There is still considerable dyspnœa on exertion, but otherwise she feels quite well. The Clinical Research Association reported of a specimen of sputum examined on Dec. 24th, 1900, "No tubercle bacilli were discovered."

It remains to be added that beyond the fact of its being situated in the country the patient's residence presented no special advantages for the carrying out of the treatment. It is situated in the low-lying valley of a river where mist and fog are very prevalent. On the other hand, the patient and her friends are people of intelligence; they entered into the treatment with zest and carried it out with zeal and thoroughness, and to this, no doubt, the satisfactory result is largely attributable.

Romsey, Hants.

[1] THE LANCET, Jan. 20th, 1900, p. 162.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF CONCURRENT ERYTHEMA MULTIFORME AND ERYTHEMA NODOSUM.

BY EDWARD MCCULLOCH, M.B., CH.B. EDIN.

ALTHOUGH modern dermatological literature favours the view that erythema nodosum is but one of the many manifestations of erythema exudativum multiforme, sufficient difference of opinion perhaps remains to warrant the consideration of those rare cases where definite erythema nodosum co-exists in the same individual with other undoubted manifestations of erythema multiforme. In the following case the character of the lesions was unquestionable, and the family history has also an interesting bearing on the etiology of the disease.

The patient was a boy, 15 years of age, who came to me on Dec. 31st, 1900, complaining of "lumps on his legs and spots on his face." He had been exposed to rain and had got a wetting a few days previously. Examination of the shins revealed a typical eruption of erythema nodosum, about five nodes being visible on either shin. Each node was of about the size of a small walnut. Their colour was a dusky red and they were tender on pressure. Their margins were ill-defined and they were unassociated with itching or pain. On the middle of the extensor aspect of the left thigh there was one similar node. On the face there were a few small groups of reddish papules; some coalesced to form small raised patches, situated on the infra-orbital regions and just external to both outer canthi. A few papules were also visible on the alæ nasi and adjacent parts of the cheeks. The patient's temperature was 100·5° F. Little general discomfort was felt. I sent him home with directions to go to bed, and ordered 15-grain doses of sodium salicylate every four hours. Next morning the facial eruption had increased in extent, and fresh patches had appeared behind both ears and on the bridge of the nose. Coalescence of some of the original papules had taken place. The papules were moderately

hard to the touch and they paled on pressure. They varied in size from a pin's head to a split pea. During the next few days the rash continued to extend, and in a couple of days after the first visit opalescence appeared in some of the papules and others displayed slight vesication, the vesicles being minute and containing a puriform secretion. A certain degree of general swelling was present for a day or two over the area of the eruption, but it rapidly subsided. Papules also appeared on the backs of the hands and fingers and fresh nodes appeared on the shins from day to day for the first week, all gradually passing through the usual succession of chromatic changes. The temperature remained slightly above 100° for six days, with the exception of Jan. 3rd, 1901, when it sank to 99·5°. On the eighth day it was 99·8° and it did not rise above this subsequently. The eruption gradually faded from both face and legs, leaving slight pigmentation behind. This pigmentation was visible on the face as late as the 20th—i.e., for about three weeks—but had disappeared by Jan. 25th.

From the above history it will be evident that the nature of the lesions was unmistakeable. The slight rise of temperature, the local appearances, their symmetrical arrangement and their distribution, were all characteristic of erythema multiforme, while the condition of the shins was absolutely typical of erythema nodosum. The case, to my mind, is a very definite demonstration of the identity of erythema nodosum with erythema multiforme. The family history was remarkable. The patient's mother had similar "lumps on the legs" before marriage; his maternal grandmother had had rheumatic fever; an elder sister died at the age of 16 years from rheumatic endocarditis with multiple joint affections; a younger sister was under my care last year with rheumatic fever, and had endocarditis and subsequent signs of mitral stenosis; another sister had had frequent attacks of acute tonsillitis (from which the patient himself has often suffered); and a maternal uncle and three of his children had had rheumatic fever. In contrast to this the patient's father is healthy and has no rheumatic personal or family history. Thus additional support is given, if it be needed, to the view that erythema multiforme is but one of the expressions of rheumatism.

Torpoint, Devonport.

NOTE ON THE TREATMENT OF OTORRHŒA.

BY DAVID WILLIAM AITKEN, M.B., C.M. EDIN.

As the method about to be described has proved successful in cases where the alternative is antral perforation it seems well to call the attention of the profession to it. Although it is quite prompt in its effects upon acute otorrhœa its benefits are greatest in old-standing cases where the mastoid has become infected. Such cases have lasted for years; there is an abominable discharge, probably with polypoid growths, and if the more threatening head symptoms are not present there are the impaired health, the atonic dyspepsia, the anæmia, and the loss of flesh to denote the dire effects upon the constitution which follow absorption.

The appliances required are a probe, some antiseptic lotion, and some absorbent cotton. The best probe for the purpose which I have seen is that supplied by Messrs. Hockin and Wilson. It has at the end two spiral teeth which, while they hold the wadding firmly, permit of its easy removal by rotating the stem counter clock-wise. The first step is to pour into the ear some of the lotion. Then take as large a plug of wadding as is deemed sufficient when screwed upon the probe to easily fit the meatus. It is now possible to make the probe and ear canal a suction syringe. The plug of wadding which forms the piston is gently pushed in and then withdrawn. If it is found to be either too large or too small another can be at once substituted which acts both easily and also fits close enough to force some of the fluid before it. This fluid reaches both the attic and also the mastoid recesses. At any rate, on the first withdrawal sufficient vacuum is produced to allow the lotion to enter the accessory cavities. It will surprise anyone who has not carried out this procedure to note how much discharge and débris are brought to the surface even after syringing and swabbing have been efficiently performed. After several repetitions of the manœuvre, the head each time being turned to the opposite side to permit of emptying the meatus, the lotion will well up clean. Now one can get any medicament to the clean surfaces. Begin with chinosol, iodoform, or amyloform in alcohol which, in my experience, is best in the absolute state. It is practically painless in almost all cases and in the exceptions the smarting is but momentary. Its advantages are: (1) it acts promptly upon the polypoid growths; (2) it is a most satisfactory antiseptic; and (3) as it evaporates it leaves a dry surface. This is most important. Many of the cases which progress so unsatisfactorily are those of patients who get a "powder to put in water to syringe the ear with." While the ear is never clean it is kept constantly in a sodden state. When the solution has been poured into the ear the process with the "piston-rod" is repeated several times. Thus the fluid is forced into all the recesses. That this is so is seen by the prompt improvement both in the local condition and also in the constitutional state. Of course, discretion is used as to the nature of the drug selected in the progress of the cure, according to the requirements—stimulant, astringent, &c.—of the case. It is unnecessary to select examples. Suffice it to say that many cases have been treated and that in some the patients have probably been saved from the somewhat serious operation of trephining the mastoid.

It is my belief that this plan, if properly carried out, would greatly diminish the number of antral perforations. In fact, it is as an alternative to that procedure that my device has been matured.

Packington-street, N.

BARIUM WATER IN WEAKNESS OF THE HEART.

BY W. BLACK JONES, M.D., B.S. LOND., D.P.H.,
PHYSICIAN TO THE LLANGAMMARCH WELLS SPA.

THE following case, which illustrates others of a similar nature treated at the Llangammarch Wells Spa, may be found to be of interest.

A man, aged 53 years, consulted me for weakness of the heart. He had had influenza seven years previously and since then had suffered from dyspnœa on exertion. He had been losing flesh of late. He was a very thin man, weighing only seven stones. The apex beat of the heart was in the nipple line and the cardiac dulness was increased to a corresponding extent. At the apex a soft systolic murmur was heard which became louder as the right base was approached; over the pulmonary area the second sound was accentuated. The pulse was thin and wiry and the frequency varied from 90 to 100 per minute. Nothing abnormal was observed in the other organs; the urine was unaffected. The patient was advised to drink the Llangammarch barium water, to have a course of barium baths, and to take outdoor exercise in moderation. He soon began to improve and after three weeks' treatment he left, feeling considerably better. After an absence of six weeks he reported that he had made greater progress; the pulse was slower, he had practically lost the dyspnœa, and he was able to walk up hill with comparative ease. He was also gaining in weight and was feeling better than he had for years.

Similar to the above case are many in which the heart has been damaged after attacks of influenza. They all receive considerable benefit from the treatment at Llangammarch and often gain considerably in strength after their return home.

Llangammarch Wells, Breconshire.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on April 10th, Mr. Christopher Heath, the President, being in the chair. Ten new members were elected and the deaths of three were reported. The death of a widow was announced. Fresh applications for grants were read from two widows and three orphans and grants amounting to £96 per annum were made and a grant of £25 for the self-maintenance of an orphan was given. Applications for continuation of grants were read from 50 widows, 14 orphans, and six on the Copeland Fund, and it was resolved that £1218 be given at the July court. The following were recommended for election at the annual general meeting to fill vacancies in the list of officers for 1901-2—viz.: Dr. Blandford as treasurer, and Mr. Sleeman, Mr. Elwin, Sir Hermann Weber, Mr. Stowers, Dr. Nix, and Dr. Palmer as directors. It was decided to hold the annual general meeting on May 22nd at 5 P.M.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quampluriumas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

METROPOLITAN HOSPITAL.

TWO CASES OF CONTRACTURE OF THE FLEXORS OF THE FOREARM TREATED BY TENDON LENGTHENING.

(Under the care of MR. HAROLD L. BARNARD.)

THE treatment of the paralysis which follows the application of splints to a limb was formerly very unsatisfactory, but the operation of tendon-lengthening has proved so very successful that it will certainly be extensively employed. The condition is by no means rare. The mode of production of the paralysis probably varies; some paralyses are due to injury to the muscles, perhaps merely from interference with their blood-supply, while others are certainly produced by the pressure on the nerves of the limb, a traumatic neuritis resulting.

CASE 1.—A little girl, aged three years, was taken to the out-patient department at the Metropolitan Hospital on May 2nd, 1900. On March 16th (six weeks before) she had broken both bones of her right forearm about the middle, and for this anterior and posterior splints were applied and the arm was supported in a sling. She was seen on the next day and complained of no pain. When the splints were readjusted at the end of a week a pressure-sore was found extending for about three inches from the middle of the front of the forearm to the wrist, whilst a smaller one was found on the back of the forearm in its lower part and a still smaller one upon the thenar eminence. The fracture united well and the sores rapidly skinned over and healed. No note was taken at the time whether the child moved her fingers or not. About the middle of April—that is to say, one month after the accident—the fingers and the top joint of the thumb began slowly to flex, and this flexion steadily progressed in spite of massage, the free use of liniments, and the restraint of a splint. It was for this progressive flexion that she was taken to Mr. Barnard six weeks after the accident. The pressure-sores were nearly healed. The position of the hand was that of *main en griffe*. When the wrist was extended the fingers were extended at the metacarpo-phalangeal and flexed completely at the two interphalangeal joints. The last phalanx of the thumb was fully flexed. When the wrist was completely flexed the fingers became extended. There was no definite area of anæsthesia, but voluntary movement was practically lost in the hand and wrist. The operative treatment of the case was delayed for the sound healing of the sores and by a chronic whitlow which appeared on June 27th upon the tip of the right index finger.

On Sept. 10th Mr. Barnard operated, six months after the injury, employing the method instituted by Mr. H. Littlewood and Mr. H. W. Page. An incision was made through the skin from a little below the elbow to just above the wrist down the middle of the forearm. The skin was reflected on either side and the tendons, which were no thicker than stout twine, were split for about one and a half inches and the halves were severed above and below on opposite sides. The fingers were then extended and the two halves of the divided tendons were allowed to slide on one another as much as was necessary and were then united with one or two sutures of No. 1 silk. In this way four tendons of the flexor sublimis digitorum, the flexor longus pollicis tendon, and, strange as it may sound, six strands of the flexor profundus tendons were divided, lengthened, and sutured. The latter tendons were so blended and adherent in the depths of the wrist that there seemed no end to the tiny strips which were separated from the mass and divided until all the terminal phalanges could be extended. Confusion was prevented among the number of tendon ends by employing guide sutures. The sublimis tendons as they were divided were transfixed by a guide suture and drawn on one side. The profundus and flexor longus pollicis tendons were then treated in the same manner. The deepest tendons were sutured first and afterwards the superficial ones.

No tourniquet was employed and only one or two vessels required clamping and hardly any ligature, although the radial, ulna, and anterior interosseous vessels were exposed in the wound. The whole operation was strangely free from hæmorrhage and oozing. The muscles exposed were pale, firm, fibrous, and dry and very unlike the normal succulent vascular muscles of children. The operation lasted for two hours. The arm was put up with the fingers fully extended on a posterior splint carefully padded. The stitches were out in a week and the wound healed by first intention.

The after-treatment consisted of massage and passive movement every day from a fortnight after the operation. The child wore a back-splint at night as there were signs of further contraction occurring. During the day the sound arm was tied up inside her clothes and she was supplied with plenty of toys to encourage her to use her injured arm.

CASE 2.—A little boy, aged four years, was taken to the out-patient department at the Metropolitan Hospital on May 12th, 1900, suffering from contracture of the left fore-

FIG. 1.

Contraction of the flexor tendons. When the wrist is extended the fingers become flexed at the inter-phalangeal joints. The top joint of the thumb is also flexed.

FIG. 2.

Contraction of the flexor tendons. When the wrist is fully flexed the fingers become extended.

arm. On March 15th the upper part of his left forearm was crushed, producing extensive swelling from effusion of blood. Fracture was excluded by x rays. The arm was placed upon an external angular splint and lightly bandaged, as it was excessively painful. About five weeks later contraction of

all the long flexor tendons commenced, and when he was seen by Mr. Barnard on May 12th, eight weeks after the accident, his left hand was in the typical position of *main en griffe*. The accompanying illustrations show the sign on which so much stress has been laid by Mr. Littlewood, that when the wrist is flexed the fingers extend and that when the wrist is extended the two inter-phalangeal joints of the fingers and the terminal joint of the thumb are fully flexed. The forearm was, moreover, fully pronated and fixed. There was no definite anæsthesia of the hand, although the skin of the digits was smooth and glossy and the whole hand much colder than its fellow. The most patient and persistent massage, passive movements, and electrical treatment produced not only no improvement but the contracture steadily progressed.

On May 30th, about 11 weeks after the injury, Mr. Barnard operated by the method already described. The tendons of the flexor sublimis profundus and flexor longus pollicis were split, divided, lengthened, and sutured in a manner identical with that described in the previous case. The profundus tendons were not so adherent and matted as in Case 1, but the absence of hæmorrhage and the dryness of the wound were nearly as marked. This was the first time that Mr. Barnard had performed this operation, and when after one and a half hours of tedious work on tiny tendons Mr. Barnard saw the mass of ragged ends and knotted silk in the wound the prognosis appeared to him to be so hopeless that he did not attempt to deal with the pronators of the arm.

The wound healed by first intention, and in a very short time it was clear that the tendons had united past expectation. The common profundus tendon to the index and second finger did not act for some weeks, and this was explained by the fact that it was not sufficiently lengthened at the operation and had to be united end to end. The same tactics as have been described in Case 1 were adopted to prevent recontracture and to compel the child to use the lame hand. The progress of the case was satisfactory. A chronic painless whitlow appeared on the index finger of this case as in the other. Improvement was so marked after four months that the mother wished something to be done for the loss of rotation in the forearm.

On Oct. 20th Mr. Barnard again operated. An incision was made partly through the upper end of the old scar but extending nearly to the elbow. The insertion of the pronator radii teres was found and the radial artery and nerve were separated from it. The muscle was then split and divided on opposite sides, as the flexor tendons had been. An attempt was then made to supinate the forearm but this entirely failed. An incision down to the bone through the periosteum was then made over the lower one and a half inches of the ulna between the flexor and extensor carpi ulnaris and with a periosteal elevator the attachment of the pronator quadratus was separated from the ulna. The forearm was then readily supinated by the exercise of a little force. The pronator radii teres was sutured in the upper wound and both incisions were closed. The forearm was fixed fully supinated upon a splint.

The after-treatment consisted of a splint at night and passive movement and massage every day. Pronation partially recurred as the masseuse when performing passive pronation and supination did not fix the ulna by flexing the elbow, and rotated the forearm from the hand and not from the end of the radius and ulna; however, rotation is fair, whereas previously to the second operation it was absent.

Remarks by Mr. BARNARD.—The present condition of both these cases is almost identical. The fingers and thumb are straight and the short muscles of the hand can act freely upon the digits, with the exception of the short muscles of the thumb in Case 1, which are still hard, contracted, and nearly powerless. All the flexor tendons have apparently united so that partial flexion can be performed and the children can grasp a stick or pick up a pin, but neither child can make a fist. The range of movement in the cicatricial muscles is only sufficient to half-flex the fingers. Both cases, however, are still steadily improving, and I hope the result may be much better. In Mr. Page's case improvement was not well marked until 10 months after operation, and five and eight months only have elapsed since the operation on Case 1 and Case 2 respectively. Both cases were shown at the Medical Society of London on Feb. 11th, 1901, and a very favourable opinion was expressed as to the results of this method of operation. I should like to record my indebtedness to Mr. J. K. S. Fleming and Mr. F. Sanger, my house surgeons, not only for their assistance at these tedious operations, but for the care which they showed in the after-treatment of the cases.

Contracture in muscles arises either from a primary lesion of the muscles when it is said to be myogenic or it is secondary to some lesion of the nervous system. The two cases of flexor contraction recorded here were myogenic in origin. Case 1 was undoubtedly a case of Volkmann's ischæmic contraction. Case 2 probably was the result of a severe contusion of the muscles and not of a long period of anæmia.

The circumstances under which a myogenic contracture may occur appear to be as follows. 1. When splints are applied too tightly to the forearm or elbow for fractures of the lower end of the humerus or the bones of the forearm. Frequently more or less of the skin sloughs, but this complication does not necessarily occur. 2. As the result of the application of Esmarch's elastic bandage or cord for too long a period to a limb, either during a bloodless operation or for auto-transfusion in collapsed cases. R. Volkmann,[1] however, confesses that he has never seen an instance of the latter. It would appear that contracture may follow the application of an Esmarch's cord for little more than one hour. 3. When the main artery of the limb has been ligated, ruptured, or contused. 4. Long-continued and severe cold may produce a similar result, as has been shown by the experiments of Kraske.[2] The contractures which result under the above circumstances may all be considered ischæmic in origin. The last cause which will be considered is hardly ischæmic in nature, although the resulting contracture is strictly myogenic. 5. After rupture or severe contusions of the flexor muscles in very young children. Thus König records a case in which the flexors of the forearm were ruptured in delivering a child and contracture followed. These cases are similar to contracture of the sterno-mastoid muscle after its rupture during delivery in breech presentation. The second case reported here would appear to belong to this class.

We must clearly distinguish these cases of contracture which are myogenic in origin from those which are primarily nervous. Thus when one group of muscles are paralysed in the leg in acute anterior poliomyelitis contraction occurs in the healthy opponents and deformity results, or again, when ulnar paralysis occurs and the interossei muscles are powerless to resist certain actions of the long flexors of the forearm, these normal muscles contract and produce the typical claw hand. There is also the great group of spastic contractures which follow lesions in the brain or upper neuron (Little's disease). In this case all the muscles tend to pass into a contracted condition, but the stronger groups prevail. In these classes of deformity the cause is undoubtedly a primary nerve lesion. In the group of cases described first by Volkmann and in that which is placed in the fifth division of causes above we must regard the contracture as a result of a direct injury to the muscle.

The pathology of the cases arising from laceration or contusion of a muscle can easily be disposed of. The delicate vascular immature muscle of a young child is lacerated or pulped by a severe injury. The delicate connective tissue between the bundles and fibres cannot prevent the extravasation of blood at the time or the reparative inflammatory process which follows from spreading widely throughout the muscle. The immature muscle-fibre is probably also more susceptible to injury and atrophies. The muscle is more or less replaced by connective tissue and this undergoes cicatricial contraction. Hence the contracture so common in congenital wry-neck, in the case already referred to, reported by König, and in Case 2 recorded above. Mr. Littlewood thinks that this explanation will cover all cases and that the tight bandage and splints are only scapegoats.

The pathology of the cases due to the four first causes—viz., tight splints, tourniquets, injuries of arteries, and continuous cold—has led to much discussion. Volkmann and Kraske hold that the muscle-fibre more or less deprived of blood coagulates and passes into a condition of rigor mortis. This change is indicated by the immediate paralysis and partial contracture of the hand. The dead muscle fibre is disintegrated and removed and a reparative hyperplasia of the perimysium follows. As this develops into fibrous tissue the contracture appears—that is to say, from a month

[1] Krankheiten der Bewegungsorgane, p. 846.
[2] Centralblatt für Chirurgie, 1879, No. 12.

to six weeks after the injury. Volkmann[3] supports his view that the contracture is not nervous in origin, not only by the fact that Kraske actually produced and saw such changes occurring in animals under similar circumstances, but he proceeds to point out that paralysis and contracture appear together in these conditions in less than a month after injury, whereas in conditions where the contracture follows a nervous lesion it is delayed for months or even years. There is no doubt that such a direct destruction of muscle-fibres does occur, but there seems no reason why the delicate axis-cylinder of the nerves or even the end-plates may not be as sensitive to anæmia and pressure as the muscle-fibre itself. This was the view apparently taken by the late Mr. William Anderson.[4]

These cases often show signs which appear to support a partial nervous origin. In several recorded cases there has been dulled sensation, if not anæsthesia of the hand. In both my cases the fingers became glossy and cold, and chronic painless whitlows developed some weeks after. It is, moreover, curious how few of these cases have complained of the splint being painful, even when they were applied to a fracture of the forearm. Dr. W. S. Hedley recently examined the muscles of the forearm in Case 2, and reported that he obtained the reaction of degeneration, although he admitted examination with the strong currents necessary was very difficult in one so young. If the muscle only had been injured one would have expected those fibres which remained intact to give a normal electrical reaction. Mr. Page also found the reaction of degeneration in his case. Perhaps the destruction of terminal nerve elements (axis-cylinder and end-plate) may prevent a regeneration of the muscle-fibre which might otherwise occur. It is, however, certain, as Volkmann points out, that these cases of ischæmic contracture differ widely from those where the muscle atrophies and much later contracts after a nervous lesion.

The history of the treatment of this very serious deformity shows a steady progress since Volkmann first described it. In the first communication on the subject he says: "We give these sad cases an almost absolutely bad prognosis. The flexor contraction of the fingers and of the wrist-joint obstinately resists all attempts to rectify it by stimulation with electricity, by passive movements, and by forcible extension under chloroform narcosis so that at last one will even be compelled to amputate." And in his later paper (1881) he remarks: "One will break the bones and tear the tendons before the muscles will give." Volkmann, however, gave a better prognosis for the similar condition in the leg, for here tenotomy was applicable and gave very fair results. The next attempt at treatment appears to have been to divide all the flexor tendons in the wrist and straighten the fingers. This was practised by Mr. Edmund Owen and Mr. Davies-Colley, and no doubt by many others. The results appear to have been unsatisfactory. The fingers were straight, so that the short muscles of the hand could act upon them, but they were almost useless. In many cases contracture recurred after a time. At a meeting of the Harveian Society in March, 1898, Mr. Raymond Johnson[5] showed a boy, aged eight years, in whom he had resected a piece of the radius and ulna so as to render the tendons relatively longer. The hand was much improved, but the bones had unfortunately not united. Still, Mr. Owen,[6] speaking of his own experience of tenotomy, thought this the better treatment.

The method employed in the two cases reported above appears to have been independently devised by Mr. H. Littlewood[7] and Mr. H. W. Page.[8] The former performed the operation first; the latter was the first to publish it. No further description is necessary of the technique of their method except to say that Mr. Littlewood's method of using guide sutures is most useful, and the necessity for it is emphasised by the fact that Mr. Page was in some doubt if he had sutured the right tendon ends together. I do not think a tourniquet will be found necessary in any of these cases. The operation is more than an hour in duration and it does not seem advisable to submit the damaged limb to a further period of anæmia.[9]

In conclusion, it seems a matter for congratulation that a method has at last been devised by which these cases, which must always be a subject of regret to those responsible for them, can at least be palliated.

[3] R. Volkmann, Ischæmic Contraction, Centralblatt für Chirurgie, Dec. 24th, 1881.

[4] "Fingers and Toes," p. 65. König's case of ruptured flexors at birth is quoted, p. 65.

[5] THE LANCET, March 12th, 1898, p. 722.

[6] Ibid.

[7] H. Littlewood, Some Complications following on Injuries About the Elbow-joint and their Treatment, THE LANCET, Feb. 3rd, 1900, p. 290.

[8] Volkmann's Ischæmic Paralysis, THE LANCET, Jan. 13th, 1900, p. 83.

[9] F. C. Wallis and H. L. Barnard: The Medical Society of London, Feb. 11th, 1901; and THE LANCET, Feb. 16th, 1901, p. 472.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Sporothrix Schenckii.—Life-history of the Bacillus Coli Communis.—Tuberculosis of the Female Genital Organs.—Adeno-sarcoma of the Kidney.—Cancerous and Calculous Disease of the Pancreas.

A MEETING of this society was held on April 16th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Mr. ALEXANDER FOULERTON made a communication on the Morphology and Pathogenic Action of Sporothrix Schenckii. The organism was a recent addition to the list of pathogenic mould fungi which had been isolated by Schenck and by Hektoen from two very similar cases in which a wound of the finger had been followed by a lymphangitis extending up to the forearm, and was followed by abscesses and ulceration. Orphuls and Moffit had recorded a fatal infection by what was probably the same parasite. In the last case numerous ovoid bodies had been found in the pus of various abscesses scattered over the body; culture tubes inoculated from this pus yielded a growth of a mould fungus. This fungus when injected into a rabbit produced nodules in the lungs and liver which contained the spore-like bodies, and from which a growth of the mould fungus was obtained. Mr. Foulerton showed cultures of the organism and sections of the lesions from infected animals, the specimens being prepared from a culture of the organism which Professor Hektoen had obtained from his case. In inoculated animals only the oval "spore form" was found in the lesions, and there seemed to be good reason for accepting Hektoen's suggestion that the "spore forms" were capable of reproduction as such. Mr. Foulerton thought that appearances seen in cultures on artificial media also suggested a reproduction of spores by direct budding from other spores. It was not quite certain whether the "spore forms" were really spores, or conidia, in the usual sense of the word; they seemed to more closely resemble the "yeast form" of, for instance, oïdium albicans. These yeast forms of oïdium could be cultivated as such on various media, but when transplanted to other media a development of mycelium occurred. Similarly in the secondary nodule produced by infecting rabbits with oïdium albicans only the "yeast form" and no mycelium might be seen. The action of sporothrix Schenckii on lower animals was rather uncertain, but white mice appeared to be the most susceptible. In these animals an inoculation into the subcutaneous tissue was followed by an infection of the tissue in the neighbourhood of the site of inoculation, with sometimes an infection of internal organs as well. In guinea-pigs the susceptibility of individual animals varied considerably. In one case a large nodule in the lung followed an intra-peritoneal injection. In other cases the animal escaped infection. The tissue-changes found in the lesion were represented by collections of round cells having the general appearance of a granuloma. The cells might afterwards undergo caseation or break down into a greyish purulent fluid. The "spore forms" of the parasites were found in the lesions in great numbers, either lying free between the tissue cells or as small masses plugging the capillaries.

Mr. W. C. C. PAKES read a paper on the Life-history of the Bacillus Coli Communis. No two bacteriologists were precisely agreed as to what organisms were typical of this bacillus, what were atypical, and what belonged to the para-colon group. He would confine his attention to what most observers regarded as the typical bacillus coli communis, but would describe some of the observations which he had made during the examination of a large number of strains of the bacillus coli communis. Out of a large number of bacilli

isolated from water, fæces, &c., he had obtained 52 which were of such a nature that they might be described as quite typical. They were short, round-ended bacilli, were motile, did not form spores or stain by Gram's method; they produced indol in nutrient broth, did not liquefy gelatin, but formed typical colours on plates; they produced a yellowish or brownish growth on potato and coagulated milk generally after about 48 hours. In addition to this they fermented sodium formate, *d* glucose and lactose, reduced neutral red, but did not decompose urea into ammonium carbonate. When these 52 strains were grown upon media containing saccharose or glycerine, however, it was found that there was a distinct difference between them; some fermented both, some only one, and some neither, so that there might be said to be four varieties of typical bacilli from their reaction to these media. In the course of the paper Mr. Pakes said that he could not agree with Dr. W. Hunter when he stated that he looked upon the reduction of neutral red as a specific reaction in the diagnosis of the bacillus coli, for the same reaction was produced by the proteus vulgaris, bacillus prodigiosus, and bacillus Kiliense. He thought that Grimbert, Péré, and other observers were mistaken in making definite statements to the effect that the bacillus coli did not ferment glycerine or that adult-derived bacillus coli could not ferment saccharose, because none of his strain had been obtained from the fæces of children.

Dr. G. F. STILL read a paper on Tuberculosis of the Female Genital Organs in Childhood. A specimen of tuberculous caseation in the Fallopian tubes and uterus from a girl, aged four and a half years, was exhibited. The necropsy had shown some adhesions of the liver and spleen to the parietal peritoneum, but no general peritonitis; there were caseous tuberculous foci in the brain and lungs with tuberculous dactylitis and a glandular post-pharyngeal abscess. Reference was made to 12 other similar cases which had come under his (Dr. Still's) observation, and it was pointed out that this condition was not very rare in children. In his experience 9·5 per cent. of tuberculous female children under 12 years of age showed tuberculosis of the genital organs, whilst more than one-third (about 37 per cent.) of the cases of tuberculous peritonitis in female children showed tuberculous lesions in the Fallopian tubes or uterus. Of 13 cases of tuberculosis of the genital organs in children nine showed tuberculosis in the Fallopian tubes, in eight the uterus also was affected, and in only one was the ovary noted as tuberculous. The close association with tuberculous peritonitis was shown by the fact that 10 out of these 13 cases showed more or less generalised tuberculous peritonitis. This association might be interpreted equally well to mean that infection reached the peritoneum through the genital tract or *vice versâ*. The important practical point whether the female genital tract was to be regarded as one of the channels of infection for tuberculosis in childhood was difficult to determine; but if so, tuberculous peritonitis should be commoner in girls than in boys. Dr. Still's statistics showed that there was no marked difference in the incidence on the sexes, whilst other observers had found tuberculous peritonitis decidedly commoner in boys. The greater frequency of tuberculosis in the Fallopian tubes than in the uterus and the absence in all the cases of affection of the cervix and vagina also seemed opposed to this view. Moreover, there were reasons for supposing that the passage of micro-organisms from the vagina to the peritoneum was difficult, whereas in the opposite direction the passage was easy. The facts that when only part of the Fallopian tubes was affected it was the part nearer the peritoneal opening, and that the Fallopian tubes were sometimes affected without lesion of the uterus, whereas in no case was the uterus affected without lesion of the tubes, seemed to point to extension downwards from the peritoneum. On the whole the evidence seemed opposed to primary infection through the genital tract in children, although the possibility of such infection in rare cases could not be denied.—The PRESIDENT remarked that he was inclined to agree with Dr. Still as to the unlikelihood of infection being introduced from without through the genital organs. He did not think it occurred in either male or in female children.—Mr. J. H. TARGETT remarked that he had examined a great many cases of tuberculous salpingitis at all ages and he quite agreed with Dr. Still's conclusions. The extreme rarity of tuberculosis of the cervix was another fact supporting those views. He did not suppose that he (Mr. Targett) had met with 10 instances. Again, he had examined hundreds of curettings and not a dozen of them proved to be tuberculous. Tuberculosis of the tubes was quite common and, in his opinion, this was probably a primary seat of the disease, which sometimes spread thence to the uterus. In the earlier stages of tuberculous salpingitis there was a liability to hæmorrhage; in the later stages he had often found large quantities of cholesterin. Did this mean previous hæmorrhage? If so, these cases had been at one time hæmorrhagic salpingitis and thus tuberculosis might be a cause of hæmorrhagic salpingitis.—Dr. STILL, in reply, said that the cases recorded by him were not the earliest age at which the disease occurred. A case had been recorded by a French observer at the age of six weeks. He could not think that sexual intercourse was a means of infection. The probability was against it. In nine out of 23 adult cases of tuberculous peritonitis the genitals were affected as well.

Dr. MORLEY FLETCHER read a paper on a case of Adeno-Sarcoma of the Kidney. The tumour was removed post mortem from the body of a female child, aged three years, who had been under the care of Mr. Howard Marsh in St. Bartholomew's Hospital. Secondary nodules were found in the liver and lungs. Microscopically the growth resembled a round-celled sarcoma, but contained in addition epithelial structures resembling ducts. The tumour did not contain muscle fibres. Sections and photographs of the growth were shown. Dr. Fletcher considered that the growth should be classed as an adeno-sarcoma and that it belonged to the group of congenital renal tumours first fully described by Birsch-Hirschfeld. Comparatively few cases had been fully reported in this country. Cases brought before the Pathological Society by Mr. F. F. Paul and Mr. Edgar Willett were in all probability of the same nature. The view most commonly held was that they were derived from the Wolffian body.

Dr. F. PARKES WEBER read notes of a case of Cancerous and Calculous Disease of the Pancreas in which Suppuration Supervened. The pancreas was replaced by a coarse, tough, fibrous meshwork, the spaces in which were of various sizes and were filled with gritty, calculous material, pus, and what appeared to be the remnants of pancreatic tissue. Microscopically the fibrous framework was found to consist of typical spheroidal-celled carcinoma. There was a fistulous communication leading from one of the suppurating cavities in the pancreas to the pyloric end of the stomach. The stomach was somewhat dilated, but there was no actual stricture of the pylorus. The patient was an extremely cachectic and anæmic man, aged 56 years, whose mother was said to have died from cancer of the stomach. One and a half years ago he began to suffer from abdominal pains. He sometimes vomited but had never had hæmatemesis. The hæmoglobin in his blood was estimated at only 20 per cent. of the normal. On some evenings slight pyrexia was noted. The urine was of low specific gravity and contained a little albumin but no sugar. The gastric contents one hour after a test-breakfast contained lactic acid but no hydrochloric acid. By abdominal palpation no tumour was felt. Death occurred from syncope about a week after admission to hospital. At the necropsy no malignant disease other than that already mentioned was found. No fat necrosis was noticed. The liver, weighing 48 ounces, showed great fatty change as well as a moderate degree of interacinous fibrosis and evidence of the association of recent inflammation with the older connective tissue increase. The cancer of the pancreas seemed to have been primary, and the interest of the case lay in the occurrence of cancer together with calculi of the pancreas, an association which resembled the well-known connexion between cholelithiasis and primary malignant disease of the gall-bladder and bile-ducts.

Dr. R. SALUSBURY TREVOR (introduced by Dr. H. D. Rolleston) exhibited a Small Cyst which he found on the under surface of a diaphragm taken from a patient who had died from cirrhotic ascites.

CLINICAL SOCIETY OF LONDON.

Volvulus of the Ileum with Severe Intestinal Hæmorrhage.—Ureteral Calculus simulating Vesical Calculus.—An Attempt at the Antenatal Treatment of Hæmophilia.—Poisoning by the External Use of Aniline Oil.

A MEETING of this society was held on April 12th, Dr. SIDNEY COUPLAND, Vice-President, being in the chair.

Dr. J. H. BRYANT read a paper on a case of Volvulus of

the Ileum with Severe Intestinal Hæmorrhage. The patient, a man, aged 21 years, was admitted into Guy's Hospital on Sept. 18th, 1900, with symptoms resembling intestinal colic which had come on after eating a large quantity of damson tart for supper. His pulse was 80, his temperature was 99° F., and his respirations were 24. The abdomen was not distended, but the lower part was rigid. A hard mass was felt below and to the left of the umbilicus. During the next day the pain continued and in the evening, about 8 P.M., he became very collapsed and passed about a pint of bright red blood and a large mass of undigested damson skins of about the size of a tennis-ball. He was so blanched and collapsed that injections of strychnine and subcutaneous infusion of normal saline solution were ordered. During the night he continued at intervals to pass blood. On the following day he was still collapsed and became restless and delirious. He died on the 20th at 5.30 A.M. Just before death he brought up a large quantity of feculent liquid. Post mortem a volvulus of the ileum was found, 100 centimetres of the gut being involved, the lowest portion of which was 10·5 centimetres above the ileo-cæcal valve. The wall of the gut was much thickened and felt œdematous. The direction of the torsion was from left to right. The mesentery appeared to be much lengthened. There was no invagination of any portion of the intestine and no evidence of embolism or of thrombosis of any of the mesenteric vessels. The question of the diagnosis was discussed. After the occurrence of the hæmorrhage and the collapse the patient was thought to be suffering from localised peritonitis and possibly thrombosis or embolism of the mesenteric vessels. During life volvulus was not suspected. Hæmorrhage with any form of intestinal obstruction other than intussusception was of exceptional rarity; he (Dr. Bryant) had only been able to find one recorded case of volvulus of the small intestine in which much blood was passed per anum.—Dr. J. P. ZUM BUSCH remarked that he had met with similar hæmorrhage per anum in association with obstruction of the bowel from hernia and he related an instance in a man, aged 74 years, with a hernia which became irreducible and herniotomy was performed, relieving the constriction. The next day he passed a pint of almost pure blood per anum and on the sixth day after the operation he died suddenly from cardiac failure. Post mortem the constricted intestine appeared to have resumed its normal appearance and there was no ulceration. He also referred to the case of a man, aged 40 years, who was suffering from strangulation of the bowel by a band of adhesions in which blood was similarly passed per anum.—Mr. T. H. MORSE (Norwich) urged that it was desirable to operate in these cases for diagnostic purposes, a practice which he had adopted under local anæsthesia from eucaine, ethyl chloride, &c. He thought that in this instance an exploratory operation would have been justifiable.—Mr. CHARTERS SYMONDS remarked that such cases were very rare; he had not seen a case since 1882. That patient was a boy, aged 18 years, who was seized with violent abdominal pain, but when admitted the symptoms were not urgent. As he did not recover the abdomen was opened and coils of small intestine were found matted together and formed a volvulus, and the patient died soon after. He was not unfamiliar with hæmorrhage per anum after hernial constriction and of this he had met with several examples; in one the hæmorrhage was severe enough to determine collapse. This pointed to the unwisdom of giving enemata in these cases. He agreed that such cases might be dealt with under local anæsthesia.—Dr. A. E. T. LONGHURST asked why the patient was not operated upon when admitted.—Dr. SIDNEY COUPLAND observed that the reason of hæmorrhage in intussusception was because the strangulation of the bowel was incomplete. In Dr. Bryant's case he presumed that the obstruction was complete and the symptoms might have suggested the possibility of intussusception having preceded the volvulus.—Dr. NORMAN DALTON said they ought to distinguish between strangulation of the vessels and strangulation of the bowel, and he referred to a case of kinking of the splenic flexure which ended in perforation, the kink being caused by adhesions.—Dr. BRYANT, in reply, said that in his case the blood-vessels had been completely obstructed, but the bowel itself was only incompletely obstructed. He had not operated on admission because this did not seem called for. He insisted on the difficulties which the diagnosis presented in such cases and the rarity of volvulus attended by hæmorrhage.

Mr. FRANCIS J. STEWARD read a paper on a case of Ureteral Calculus Simulating Vesical Calculus. The patient, a man, aged 24 years, had suffered for three years from attacks of painful micturition accompanied by hæmaturia. These attacks were slight at first but later became more severe. A week before admission into Guy's Hospital pain became much more severe and the urine became scarlet in colour and continued so until admission. On admission, on August 9th, 1900, there was a considerable amount of blood and a little pus in the urine. There was severe pain in the perineum and at the end of the penis both during and apart from micturition. There were no pain, no tenderness, and no fulness over either kidney or ureter. The bladder was sounded with a negative result and two radiographs were taken, but neither showed anything abnormal. The case was thought to be one of encysted vesical calculus. On August 24th the bladder having been inflated with air was opened above the pubes and a stone was felt impacted in the right ureter two inches from the vesical orifice. The stone could not be moved down the ureter, so the wound was closed. At a second operation on Sept. 2nd an incision was made in the lower part of the right linea semilunaris and the abdomen was opened. The stone was then pushed up the ureter to a point just above the common iliac artery. The ureter was then incised and the stone removed. The incision in the ureter was closed by a continuous silk suture of No. 0 Chinese twist passing only through the outer coats, and the peritoneum was sewn over it. The abdominal incision was closed with the exception of the lower part, through which a gauze drain was passed down to the site of the sutured ureter. No leakage took place and the patient left the hospital quite well and free from all symptoms. He was last seen on Jan. 8th, 1901, and was then quite well. The calculus weighed nine grains and was cylindrical in shape, measuring about half an inch by one-third of an inch. It consisted probably of uric acid with a small deposit of phosphates in some places, the surface being very irregular and covered with small knobs. The chief point of interest was in the peculiarity of the symptoms, all of which pointed to vesical calculus, there never having been at any time a single sign or symptom of an unilateral lesion. The suprapubic cystotomy was rendered extremely easy and satisfactory by the air distension, the peritoneum being lifted well up, and the bladder reached with very little disturbance of the cellular tissue. The absence of the usual flooding of the wound on incising the bladder was another great advantage.—Mr. T. H. KELLOCK suggested that the stone in that position might possibly have been felt per rectum, and, if so, this would have obviated the incision of the bladder. He did not concur in the view that inflation of the bladder with air was so superior to water, because when the bladder was incised the air escaped at once, whereas water was slower to escape. He congratulated Mr. Steward on the success of his suture of the ureter, but remarked that if there had been any leakage this might have proved dangerous, and he wondered why he had not put in the drain from the ureter to the loin.—Dr. J. G. GLOVER asked if there was any dilatation of the ureter above the seat of obstruction by the stone.—Mr. CHARTERS SYMONDS congratulated Mr. Steward on the success of his case. In illustration of the difficulty which the diagnosis sometimes presented he mentioned a case in which the urine had an odour suggesting fæcal contamination. A skiagram was made and was stated to show a stone in the bladder, though examination by the sound failed to reveal it. At a subsequent operation a stone was found in the lower end of the left ureter and this was evidently the stone which in the skiagram appeared to be in the bladder. He questioned whether normal urine was of itself a danger in the peritoneum.—Mr. STEWARD, in reply, adhered to his preference for inflation of the bladder with air instead of water. He put a gauze drain in front because to make a posterior incision it would have been necessary to turn the patient over and clean the skin of the back and he was already exhausted by the operation. The ureter was very little distended—in fact, he had been unable to work the stone up into the loin as he had intended. He admitted that normal urine might not be harmful, but as there had been pus in this patient's urine for some time it might well be septic.

Dr. W. H. B. BROOK (Lincoln) read a paper entitled an Attempt at the Antenatal Treatment of Hæmophilia. In June, 1900, he had been consulted by a woman, aged 34 years, who was expecting her confinement early in

the following October, whose family history showed a marked tendency to hæmophilia. A brother of her mother died at the age of 11 years from hæmorrhage following the extraction of a tooth. One brother died at the age of 12 years from gangrene following hæmorrhage into the knee-joint. The eldest son of the patient, aged 10 years, was a typical "bleeder," having repeatedly suffered from hæmorrhage into the joints, from the alveoli and gums at the second dentition, and from hæmaturia. Her second son, born in 1894, had hæmorrhage from the cord at birth, showed marked bruising at the age of three months, and died, aged 12 months, from cerebral hæmorrhage. At the birth of each of these children there was considerable post-partum hæmorrhage and the patient was very weak for some time afterwards. Both these children were white when born. With the view of, if possible, obviating this tendency to hæmophilia the patient during the remainder of her pregnancy was placed upon chloride of calcium in doses of 10 grains three times a day in order to increase the coagulability of the blood. Iron and strychnine with arsenic were also given with the object of improving the tone of the vascular system both of the mother and fœtus. The patient was delivered of a male child on Oct. 3rd, 1900; there was no post-partum hæmorrhage and she made an excellent recovery. The child was of a healthy mottled appearance and had shown no tendency to hæmorrhage, not even at the time of vaccination. At the present time he was in excellent health. The patient might yet show signs of the diathesis, but his brothers had shown symptoms before this age.—Dr. SIDNEY COUPLAND thought that while the treatment might have a good effect in respect of the mother it was going too far to suppose that it could do much for the fœtus, especially as it had been commenced at such a late period. A large number of observations of the kind would be required to prove its efficacy in this direction.—Dr. C. R. BOX asked Dr. Brook whether any members of that family had suffered from measles, scarlet fever, or other infectious disease, and whether any hæmorrhagic complications had been observed.—Dr. BROOK, in reply, remarked that the tendency of modern views was in favour of the curable nature of hæmophilia, and this fact had encouraged him to try the treatment even at that late period of gestation. He was unable to reply to the last question.

Dr. STCLAIR THOMSON read a paper on a case of Poisoning from the External Use of Aniline Oil. Equal parts of aniline oil and rectified spirits having been recommended as a vehicle for cocaine in order to produce local anæsthesia in the ear[1] Dr. Thomson prescribed a 10 per cent. solution of cocaine in this menstruum for a colleague suffering from furunculosis. A small pledget of cotton-wool moistened with this solution was used at bedtime and the patient slept well. Next morning, as the pain threatened to return, he again made use of the drops about 5 A.M. At 7.30 A.M., while still in bed, he quite accidentally noticed a peculiar blueness of his finger nails and his wife remarked that his face was also blue. The face and hands were found to be of a decided dark blue colour, and this was noticeable in the skin under the finger nails and on the lips and tongue. There was no fever or mental disturbance. The pupils were normal. The respiration was quiet and easy. The pulse was small and somewhat increased in frequency, and when Dr. David Lees had examined the heart the left ventricle was enlarged to two finger-breadths outside the left nipple line. The patient had not previously had any heart trouble and there was nothing discoverable in the heart or lungs to account for the cyanosis. It was therefore ascribed to the toxic effect of the aniline oil on the red corpuscles. The blue colour gradually disappeared in the course of the day. The area of cardiac dulness again became normal and no murmur was discoverable. Reference was made to a communication made to the Académie de Médecine in July last by M. Landouzy and M. Georges Brouardel describing the cases of ten children who were seized with prostration, pallor, and blueness soon after wearing yellow shoes which had recently been coated with a pigment found to contain 90 per cent. of aniline. When this dye was applied to the shaven surface of the skin of guinea-pigs and rabbits they died asphyxiated in from 24 to 30 hours. Some unpublished cases of Dr. Kelynack described similar symptoms, together with gastro-intestinal catarrh and anæmia in chronic cases, among those employed in aniline works. Evidently the skin readily absorbed aniline and this might give rise to alarming symptoms which could not otherwise be explicable.—Dr. CHARLES W. CHAPMAN said that he was the patient whose case had been described and remarked that the most important point seemed to be the cardiac dilatation, which had called for prolonged rest. Unless this were remembered in future cases a patient by getting about too soon might inflict permanent damage on the dilated heart. He also remarked upon the smallness of the dose.—Dr. LEWIS G. GLOVER, alluding to Dr. Thomson's remark that the symptoms reminded him of poisoning by antipyrin, asked whether any cardiac dilatation had been noticed in this connexion. He referred to a case in which large doses of exalgin had been taken and he had noticed marked blueness but no cardiac dilatation.—Dr. STCLAIR THOMSON, in reply, said that in a case of antipyrin poisoning he had noted some cardiac dilatation, but as the patient was suffering from typhoid fever the dilatation might possibly have been caused by the fever.

[1] Dr. A. A. Gray THE LANCET, April 21st, 1900, p. 1125.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 11th, Dr. E. Wearne Clarke, the President, being in the chair.—Dr. G. Wilkinson showed: 1. A patient, aged 42 years, from whom the Right Half of the Lower Jaw had been Removed. He had had a tumour of the jaw for two years. The specimen with microscopic slide was shown—a dental cyst in the lining of which a large epitheliomatous tumour had developed. 2. A patient from whom a large Round and Spindle-celled Sarcoma had been removed from the naso-pharynx and right nasal fossa after supra-alveolar excision of the right upper jaw. 3. A patient who had been operated upon successfully for Ruptured Gastric Ulcer seven hours after onset of symptoms of rupture. 4. A case of Transverse Fracture of the Patella with close (? bony) union and perfect mobility of the joint treated by elastic compression, massage, and passive movements.—Dr. D. Burgess showed the following cases: 1. Disseminated Sclerosis with general (not "intention") Tremors. 2. Paraplegia following immediately on an attack of Rheumatic Fever. 3. Glossitis Exfoliatricans Marginata of three years' duration in a child. 4. A case of Hydatid of the Lung.—Dr. Arthur J. Hall showed the following cases: 1. Lymphangiectodes in a young man. The affection had been noticed since childhood and it occupied a large area over the lower half of the right scapular region extending round to the axilla. It consisted of numerous small groups of vesicle-like structures of a brownish colour containing clear fluid and consisting of dilated lymphatics. Here and there were small clusters of mixed lymphatic and blood capillary tufts. 2. Bilateral Rodent Ulcer of six years' duration in a woman. The new growths occupied the skin just beyond the outer angle of the right eye and the inner half of the left lower eyelid. Ulceration was slight on the right side and absent on the left side. There was no glandular enlargement. Microscopically it was indistinguishable from rodent ulcer. 3. A case of Extensive Psoriasis. 4. An unusual form of Occupation Dermatitis in an elderly man who had worked all his life as "finisher" in the electro-plating trade. In this occupation he handled a mixture of finely-powdered lime with sufficient oil to form a soft adhesive powder. Fissures which appeared in the course of an attack of dermatitis, instead of healing became larger and formed gradually enlarging ulcers. The explanation was that the lime becoming lodged in the fissures and being moistened with lymph formed a slight caustic which caused the ulceration. Protection of the fissures and ulcers soon brought about healing.—Dr. Hall also showed the following microscopic specimens: (1) Squamous Epithelioma of the Mamma; (2) Rachitic Rib; (3) Skin showing a Deposit of Coal-dust in the Dermis (miners' marks); (4) Extreme Fatty Degeneration of the Myocardium, from a girl, 15 years of age, who had marked congenital syphilis and who died with symptoms of heart failure; and (5) Syphilitic Interstitial Myocarditis in a young man who died in an epileptic fit and in whom the whole of the left ventricle was permeated by fibrous tissue.—Dr. Wilkinson read a paper on Aseptic Methods in General Practice. The importance of asepsis in general practice was insisted upon and several simple methods of sterilising and keeping sterile instruments, catheters, and surgical dressings were demonstrated.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held in the Medical Society's Reading Room, Owens College, on April 10th, Dr. A. T.

Wilkinson being in the chair.—Dr. D. Orr and Dr. R. G. Rows gave a lantern demonstration illustrating the Normal Cells in the Posterior Root Ganglia of the Dog and of the Human Subject; they also exhibited the degeneration which occurred in these cells in general paralysis of the insane. The nerve cells of the ganglia were grouped under five types, according to the variations in the size and arrangement of their chromophile elements; attention was directed to the fact that each variety of cell degenerated in a characteristic manner. Special mention was made of the difficulty encountered in procuring an efficient fixative for the delicate cells of the spinal ganglia, and the value of a mixture of saturated solution of corrosive sublimate and picric acid in equal parts in preference to inefficient fixatives, such as alcohol and formalin, was demonstrated. Spaces and shrunken cells were then shown to be artefacts due entirely to imperfect fixation or post-mortem change in the tissues.—Professor J. Dixon Mann showed the Stomach of a Patient who died from Malignant Disease of the Pylorus, together with a number of the Pupa-cases of a Dipterous Insect, probably the House-fly, which were found in the stomach after death. Nothing was observed during life that indicated the presence of the larvæ; none were seen in the frequent and copious vomit. The extreme narrowing of the pylorus caused by the carcinomatous deposit was sufficient to prevent the pupa-cases being evacuated by the bowels.—Mr. J. E. Platt showed a specimen of Cirsoid Aneurysm of the Forehead removed by operation. The patient was a male, aged 25 years, and the tumour had been growing for four years before operation. No history of injury or other cause for its growth could be discovered. It was fed chiefly by branches of the superficial temporal artery, but also to some extent by the supra-orbital and frontal arteries. Three large veins from its deep surface entered the diploë. The superficial temporal artery had been ligatured near the zygoma and the aneurysm was afterwards removed by dissection. The operation had not been attended by any great amount of hæmorrhage and the patient had made a rapid and complete recovery. The tumour was composed of a close network of thin-walled blood-vessels.—Dr. W. E. Fothergill showed a drawing of Multiple Ulcers of the Inner Side of the Left Thigh in a patient who was suffering from Kraurosis Vulvæ. The onset and appearance of the ulcers were much more suggestive of one of the infective granulomata than of malignant disease, but microscopical sections of a clipping from the edge of one of the ulcers (shown) clearly demonstrated the epitheliomatous nature of the condition.—Dr. T. N. Kelynack exhibited a number of coloured drawings, photographs, and other preparations illustrating the more important lesions met with in the recent cases of Arsenical Poisoning from contaminated beer occurring in Manchester and the surrounding districts.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on April 3rd, Mr. A. H. Young, the President, being in the chair.—Dr. J. Stavely Dick mentioned a case of Pneumonia which ran a mild course. The defervescence occurred on the ninth day, respirations, pulse, and heart sounds being all normal on that date. Next day there was a sudden attack of palpitation of short duration, the pulse being so irregular and intermittent as to be uncountable; this was followed by three days of apparently most satisfactory convalescence, then a return of the irregular cardiac rhythm and unexpected death in two hours. Dr. Dick suggested pulmonary thrombosis as the most probable cause of death; and also the *a priori* probability that the coagulability of the blood varied in different types of pneumonia, and that this might be a factor worth consideration in connexion with unexpected deaths in convalescence.—Dr. Dick also read notes of a case in which the cannula was removed three and a half years after operation for Laryngeal Diphtheria with a good result for three months, when reintroduction of the cannula became necessary during a severe attack of influenzal laryngitis.—Dr. A. T. Wilkinson showed two cases that had been under his care in the Manchester Royal Infirmary, Dr. F. Craven Moore describing the pathological conditions found post mortem. In the first case the patient was a man, aged 35 years, with marked mitral stenosis, internal and external pericarditis, and old femoral and recent renal thrombosis. The interest lay in the efficient protection of the general circulation and system by the great hypertrophy of the left auricle and right ventricle compared with the marked lung induration, &c., which in effect led to the fatal issue, though actually the man died from syncope. The left auricle contained 10 ounces of clot and showed efficient muscle. The left ventricle was normal. The heart weighed 26 ounces. The second case was that of a woman of cachectic appearance, aged 43 years, with gastric disturbance dating back one year and intense obstructive jaundice of four and a half months' standing. She had recurrent vomiting and severe epigastric pain. The vomited matter contained free HCl. There was neither sugar nor albumin in the deeply jaundiced urine. The liver was somewhat enlarged and the gall-bladder was distinctly palpable. Otherwise no tumour could be discovered. The patient went from bad to worse and with falling temperature and delirium she died from asthenia and cholæmia. The necropsy showed a dilated stomach and the first part of the duodenum was catarrhal; there was a new growth of the ampulla of Vater; the mucous membrane over the papilla was healthy; the pancreatic duct was dilated and the tissue was sclerosed.—Dr. F. Villy made some remarks on some cases of Intubation for Laryngeal Diphtheria.—Dr. J. Dreschfeld mentioned a case of Sarcoma of the Pleura and showed specimens.

FOLKESTONE MEDICAL SOCIETY.—A meeting of this society was held at the residence of Dr. T. Eastes on April 3rd.—Mr. A. W. Read read a paper on the Clinical Relationship of the Various Forms of Bright's Disease and some of their Symptoms in which the difficulty of connecting chronic renal disease with antecedent acute nephritis was set forth. Reference was specially made to the insidiousness of chronic renal cirrhosis, advice being often sought for symptoms which apparently had no connexion with the kidney. Mr. Read spoke about the difficulty of establishing the relationship of the small white contracted kidney with antecedent nephritis on the one hand, and with the red granular kidney on the other. The second part of the paper made reference to uræmia, the various forms of dyspnœa or so-called uræmic asthma, and the relationship of the skin to the kidneys. Mr. Read remarked that frequently patients suffering from uræmia would refer to a period in the past during which they were wont to perspire freely; when this excessive action of the skin ceased vague symptoms of malaise came on and a toxæmic condition arose. The paper closed with a passing reference to the use of pilocarpin, morphia, and calomel in cases of renal disease.—A discussion followed in which the following took part: Dr. W. J. Tyson, Dr. C. Latter, Dr. P. V. Dodd, Dr. A. E. Larking, Dr. P. G. Lewis, Dr. W. L. Chubb, Mr. W. F. Chambers, and Mr. A. Randall Davis.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the session of this society was recently held in the Medical Library of University College, Dr. D. S. Davies being in the chair.—Mr. T. Carwardine showed a patient after operation for a large Ventral Hernia.—Dr. L. Firth spoke on the condition of the patient.—Dr. Walter C. Swayne read notes on a series of cases of Cœliotomy for Diseases of the Uterus and Ovaries.—Mr. J. Ewens, Dr. E. H. Stack, Mr. Paul Bush, and Dr. Firth discussed the paper.—Mr. Munro Smith read, for Mr. A. W. Prichard, notes of several operations undertaken for the Closure of an Artificial Anus.—Dr. Firth and Mr. Carwardine remarked on the case.—Dr. Stack read notes of a case simulating Plague.—Dr. Davies, Dr. J. E. Shaw, Professor Stanley Kent, Dr. T. Fisher, and Dr. James Fletcher remarked on the case.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on April 11th, when Mr. Hugh E. Jones read a paper (which was illustrated by diagrams) on Glaucoma, with Special Reference to its Differential Diagnosis in Routine General Practice.—An interesting discussion followed and the following members took part in it: Mr. W. Latham (the President), Dr. F. Rees, Mr. C. M. Brady, Dr. J. Blair, Mr. J. H. Fletcher, Mr. E. H. Monks, and Dr. J. M. Boyd.

CARDIFF INFIRMARY.—At the meeting of the managing committee of the Cardiff Infirmary held on April 11th it was reported that the new operation theatre was nearing completion, and it was hoped that it would be formally opened on June 6th. It was decided to invite Mr. Edmund Owen of St. Mary's Hospital, to perform the opening ceremony.

Reviews and Notices of Books.

Lehrbuch der Physiologie des Menschen. Von G. VON BUNGE, Professor in Basel. Erster Band: Sinne, Nerven, Muskeln, Fortpflanzung. In Acht-und-zwanzig Vorträgen. Mit 67 Abbildungen im Text und 2 Tafeln. (*Text-book of Human Physiology.* By Professor G. VON BUNGE of Basle. Vol. I.: Senses, Nerves, Muscles, Reproduction. In 28 Lectures. With 67 Illustrations in the Text and 2 Plates.) 8vo. Leipsic: F. C. W. Vogel. 1901. Pp. 381. Price 10*s.*

THE text-book here presented to the student by Professor G. von Bunge of Basle has some peculiarities. It is written in the form of a series of essays or lectures delivered, we presume, to his class—an arrangement which has the advantage of permitting a freer style of expression than is common in physiological treatises; in fact, Brücke's Vorlesungen constitute the only example with which we are acquainted of a work written on the same lines. The order in which the several subjects are considered is unusual, for Professor von Bunge commences with the consideration of the senses, which naturally leads to that of the brain and to the discussion of the subjects of sleep, hypnotism, and hybernation. Then follow chapters on the Sympathetic System of Nerves; on the General Physiology of the Nerves and Muscles; Animal Electricity, Voice and Speech, Generation and Heredity,—all subjects that are usually relegated to the close of a treatise on physiology. The reasons advanced by the author for commencing with the senses are that all our ideas are derived from and through them and that they therefore constitute the basis on which physiology must rest, whilst from another point of view they form the crown and summit of all human knowledge.

Professor von Bunge has produced an eminently interesting and readable book and this is mainly due to the clever manner in which he adduces facts ascertained by experiment or drawn from pathology to illustrate and to support his views. A well-told case, as readers of the works of Watson and Trousseau, Graves and Charcot and Latham, will readily admit is often more convincing than a dozen pages of reasoning, however logical it may be. This anecdotal mode of writing renders Professor von Bunge's treatise quite refreshing to read. He has collected from various sources some interesting facts in regard to pain, a subject which, whilst it looms large in medical practice, is often passed over in silence in works on physiology. He remarks incidentally that the laity generally, and the antivivisectionists in particular, have imbibed the erroneous idea that the deeper the cut and the more deeply seated the organ the more acute is the pain experienced, whereas muscle and bones and tendons are nearly insensitive, and the same may be said of the brain and liver, though the growth of tumours or the process of degeneration may be accompanied by much suffering. The centres for pain are unknown, though they are probably to be located in the brain.

The chapter on Hearing is an excellent instance of the uncertainty of physiological inferences and statements that are usually accepted as perfectly demonstrated. In the first place, it seems to be established that fish are absolutely deaf, the stories of carp assembling at the sound of a bell being erroneously interpreted according to recent experiments, whilst removal of their semicircular canals has no influence on their equipoise or movements. The labyrinth seems in these animals to have nothing to do with hearing. Moreover, the utriculus and the semicircular canals can be removed in birds and even in mammals without producing deafness. The author points out that Ménière's disease may occur as a result of lesions and disturbances of the middle ear and of affections of the acoustic nerve and cerebellum, and Politzer has seen a case of complete absence of the semicircular canals in man without any disturbance of coördination. It is clear that the subject of hearing requires further research before the functions of the several parts can be allocated with certainty. The course of the sensory and motor fibres in the spinal cord and brain are well traced, the author relying for his illustrations upon Professor Edinger. It is remarkable to find that at the beginning of the twentieth century the functions of the cerebellum are almost entirely unknown, the last statement being that in many animals and in man it has little or nothing to do with the strength or activity of the muscles or with their coördination, whilst it is possibly, as Gall maintained, associated with the sexual instinct.

Some interesting observations are made upon sleep. The author has been at considerable pains to discover the origin of the statement frequently made that a Chinese mode of punishment is death by prevention of sleep. He traces it to the late Dr. Forbes Winslow who appears to have copied it from the *Louisville Semi-monthly Medical News*, published in 1859, a journal that von Bunge has not been able to meet with. Still, if, as in Madame Manasseine's experiments, sleep be prevented for four or five days in young dogs they die, death being preceded by a great fall in the temperature and by a reduction in the number of the blood corpuscles from 5 000 000 to 2 000 000 per cubic millimetre and by considerable loss of weight. Man sleeps away one-third of his life and the dog two-thirds, but the sleep of the latter animal is very light; and Professor Bunge thinks that on this very circumstance depends the prehistoric association of man and the dog which he regards as a true symbiosis, the watchful and easily awakened dog guarding the more profoundly sleeping man from nocturnal beasts of prey, whilst man, with the aid of the dog, provides by hunting during the day the food for both. The observations on dreams are also good, and not less interesting is the chapter on Hypnotism. In conclusion, we have much pleasure in recommending Professor von Bunge's book to our readers.

A Text-book of the Diseases of Women. By H. T. GARRIGUES, A.M., M.D. Third edition, thoroughly revised. With 367 Illustrations. London and Philadelphia: W. B. Saunders and Co. 1900. 8vo. Pp. 756. Price 18*s.*

THE fact that this book has reached a third edition is a proof that it has met the expectations of its author. His aim has been to write a practical text-book, and he may be said to have in part succeeded. In many instances the book enters into much more detail than is the case in the ordinary gynæcological text-book, while as regards modes of treatment Dr. Garrigues undoubtedly shows a considerable wealth of resource.

The work is divided into special and general diseases. The first part treats of the Development, Anatomy, and Physiology of the Pelvic Organs and Treatment in General. The second part includes an account of all the Various Diseases of the Genital Tract. The chapter upon the Development and the Anatomy of the Pelvic Organs is condensed from the author's article upon the subject in a "System of Gynæcology," by American authors. It gives a very complete account of the subject and is fully illustrated. The author's contention that the illustrations form a complete atlas of the embryology and anatomy of the female genitalia may be considered as correct. The illustrations throughout the whole book are numerous and on the whole are well chosen and well reproduced. The chapter upon General Etiology contains many useful suggestions. The subject of special examination and local treatment is

very fully discussed. It is interesting to note that Dr. Garrigues, although fully approving of the principles of the Weir-Mitchell treatment, is of opinion that gynæcological patients should have as much open-air exercise as possible, a point upon which we fully agree with him. The value of medical and electrical treatment is fully recognised, and, as is stated in the preface, they are whenever possible accorded precedence over surgical measures. In support of his recommendation of electrical treatment the report of the special committee appointed by the American Gynæcological Society is quoted, three out of its four members being in favour of electricity as a therapeutic measure. The portions of the book dealing with minor gynæcology and its disorders are much fuller and more complete than those devoted to the more serious diseases. This inequality of treatment destroys the book's claim to be a really first-class text-book. It is, however, eminently practical and will no doubt prove of value to such as are in need of just the information it furnishes. The printing is good and the index is sufficiently full.

A Text-book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By ARTHUR R. CUSHNY, M.A., M.D. Aberd., Professor of Materia Medica and Therapeutics in the University of Michigan; formerly Thompson Fellow in the University of Aberdeen and Assistant in the Pharmacological Institute of the University of Strassburg. London: Rebman, Limited. 1900. Pp. 730. 47 Engravings. Price 21*s*.

TEXT-BOOKS on pharmacology, materia medica, and therapeutics are numerous, and many of them are excellent manuals, and there would seem to be no call for an increase in their number. The volume now under consideration, however, is intended to supply a want in the teaching of the subject of pharmacology to those students who have completed the purely scientific branches of medicine and are beginning their clinical studies. Dr. Cushny has attempted to bridge over the hiatus which exists between the phenomena occurring in the normal organism and those which are elicited in the therapeutic use of drugs, to show how far the clinical effects of remedies may be explained by their action on the normal body, and how these in turn may be correlated with physiological phenomena. It necessarily follows that the subject is treated from the experimental standpoint and that the results of the laboratory investigator are made the basis of almost every statement. Starting with such ideas, which the author has consistently followed, a most interesting volume is the result.

The introduction, which occupies 42 pages, deals in a capable manner with the mode of action of drugs, their elective affinity, their chemical composition, their pharmacological action, their methods of administration, and their classification.

Part I. is headed "Organic Substances which are Characterised chiefly by their Local Action." These include the demulcents, emollients, flavouring substances, bitters, counter-irritants, and the like. Part II. is occupied with a consideration of "Organic Substances Characterised chiefly by their Action after Absorption." The author's remarks on alcohol are worthy of note. In answer to the question, "Is alcohol a food?" he remarks: "It would seem, therefore, that while alcohol undergoes combustion in the tissues and leads to the deposit of fat it is questionable how far it can replace the carbohydrates and fats in their relation to nitrogenous metabolism; that is, alcohol tends to prevent the waste of the fats and carbohydrates of the body, but probably is of little value in economising the nitrogenous waste. If alcohol is to be used as a food it must be associated with a diet rich in proteids and on this condition it can replace to some extent the ordinary foodstuffs."

The whole work has been conducted on sound scientific principles, the experiments have been carried out with care and skill, and the accounts given of them are full and easily comprehended and form a most valuable addition to our knowledge of the actions of drugs. A good example is that of the experiments performed to show the action of ether and chloroform. The effects on the central nervous system, the respiratory centre, the circulation, the blood, and metabolism of the tissues are carefully demonstrated; and the observations on the "cause of death" from these anæsthetics are interesting and instructive.

A typical example of the general plan on which the different drugs are discussed is yielded by the section on the Opium Series. The opening remarks deal with the chemical characteristics of opium and its derivatives, then follows a description of the symptoms produced by their administration in animals and in man. The physiological action is next considered, the effect produced on the various systems of the body being clearly recounted. A list is given of the preparations of the drug as found in the pharmacopœias of the United States and Britain. The therapeutic uses of opium and its derivatives receive due attention and the symptoms of poisoning, both acute and chronic, are accurately described. It will thus be seen that the manual is made as complete as possible. We have not space to comment on the many other excellent accounts of the various drugs, but we would especially mention as well worthy of perusal the remarks on antipyretics (acetanilid and antipyrin series) and on the digitalis series.

Part III. is concerned with Combinations of the Alkalies, Alkaline Earths, Acids, and Allied Bodies; Part IV. describes the actions and therapeutic uses of "the Heavy Metals"; Part V. imparts useful information on Ferments, Secretions, and Toxalbumins; and Part VI., which only occupies a couple of pages, is headed Menstrua and Mechanical Remedies.

Taking the book as a whole, we consider it a most valuable publication and can thoroughly recommend it to our readers who desire reliable and exhaustive information on pharmacology.

Atlas and Epitome of Special Pathologic Histology. By Docent Dr. HERMANN DÜRCK, Assistant in the Pathologic Institute; Prosector to the Municipal Hospital L.I. in Munich. Authorised translation from the German. Edited by LUDVIG HEKTOEN, M.D., Professor of Pathology in Rush Medical College, Chicago. Circulatory Organs; Respiratory Organs; Gastro-Intestinal Tract. With 130 Coloured Illustrations on 62 Lithographic Plates. London and Philadelphia: W. B. Saunders and Co. 1900. Pp. 158. Price 13*s*. net.

THE present volume forms the first of a series of three designed to cover the whole ground usually embraced under the term "pathologic histology." These volumes enter also into the general series of hand atlases produced by the same publishers. In an address given at the Medical Graduates' College and Polyclinic Professor Osler said that instead of looking to the East, as in times past, for wisdom we should in the near future turn rather to the West, and at the present moment the west is certainly doing much to transmit the wisdom of Europe to English-speaking races, judging by the very large number of American translations of German works which are being published. It must be confessed that the importance of the works selected for translation and the general excellence of the publications justify this movement, and the present work forms no exception to the rule. The book appears to be not so much an atlas with descriptions of the plates as a concise systematic pathology which is excellently illustrated by the drawings reproduced. The plates are lithographs in colour and seem to be admirable representations of typical histological sections. It is interesting to compare them with some recent photographic illustrations of pathological processes which have appeared, and it must

be confessed that the comparison is in favour of the lithographs. Photographs of sections, except for special purposes, are not very useful for demonstration, and it seems a pity to give up the advantage of colour which can accurately reproduce the effect of the stains which are of such great importance for the differentiation of the tissues. While recognising the value of such a book as the present there seems to be some danger of its improper use—the student is apt to consider these illustrations as substitutes for his own sections instead of merely aids by which he may learn to recognise what his own specimens teach. The author himself recognises this danger and deprecates the separation of the book from the teaching of the laboratory. The methods used in the preparation of the sections appear to be up-to-date, but there is attached to the descriptions of the figures no statement of the staining methods or the stains used; the magnification is in all cases given.

The lithographs are produced in Munich and are good. Unfortunately, this book, like so many containing plates, is indifferently dealt with by the binder and, unless we are unlucky in our copy, a moderate amount of wear and tear will leave very few plates undetached. The book, with the caution as to its use mentioned above, will prove a useful addition to the libraries of medical students and will probably be decidedly popular.

Terapia dell' Afasia e degli altri Disturbi del Linguaggio. Per H. CHARLTON BASTIAN, M.A., M.D. Londra, F.R.S. Traduzione Italiana del Professore UMBERTO GABBI. Torino: Unione Tipografico-Editrice. 1901. Pagg. 470. Prezzo 6 lire. (*On Aphasia and other Defects of Speech.* By H. CHARLTON BASTIAN, M.A., M.D. Lond., F.R.S. Translated into Italian by Professor UMBERTO GABBI.)

THIS work is a translation of Dr. Charlton Bastian's book, "Aphasia and other Speech Defects," which in its English dress was reviewed in THE LANCET of Oct. 15th, 1898, p. 997. The book itself is an expansion of the Lumleian Lectures which Dr. Bastian delivered before the Royal College of Physicians of London in 1897 and which were published in full in our columns.[1] Dr. Bastian's views on this somewhat intricate subject are well known and if not universally accepted are in this work supported by plenty of confirmatory evidence. Shortly, he considers that the so-called motor areas in the brain are really sensory centres of "kinæsthetic type," and in connexion with speech processes he believes that there are two centres of this type—a glosso-kinæsthetic centre related to articulatory processes and a cheiro-kinæsthetic centre in connexion with writing processes. Besides these there are an auditory word-centre and a visual word-centre—sensory centres—and lesions accounting for speech defects are to be looked for in those centres or in the fibres connecting them with each other or with the motor centres in the bulb, or in these motor centres themselves.

The problems involved in the consideration of such a subject as aphasia are by no means easy, neither can the matter be expressed in very simple language. But Professor Gabbi has, we think, been very successful in his difficult task of translation from a foreign language and his work will be of the greatest value to those of our foreign medical brethren who cannot read an English treatise. Praise is due to the printing of the book which is very clear.

Affections Chirurgicales du Tronc, Mamelles, Organes Génitaux de la Femme: Statistique et Observations. (*Surgical Affections of the Trunk, Breasts Female Genital Organs: Statistics and Observations*) By Professor POLAILLON. With Illustrations. Paris: Octave Doin. 1901. Pp. 750.

THESE statistics are based upon the practice of Professor Polaillon during the 20 years from Jan. 1st, 1879, to Jan. 1st, 1899. When the practice of antiseptic and aseptic surgery had demonstrated how benign surgical operations had in general become most of the affections peculiar to the female genital organs appeared to be susceptible of cure by operative measures. The result was that operative gynæcology was practised to such an extent that in view of the immediately successful results the ultimate fate of the patient was in danger of being overlooked. As Professor Polaillon points out, the rôle of statistics is to recall us to the realities and to prove that operative success is not always synonymous with therapeutic success, and that the safety of operations is but relative. As he shows, in spite of the progress due to antisepsis and asepsis the mortality of major abdominal operations is still considerable. Even if it ever be reduced to *nil* for minor operations it must in complicated cases bear a relative proportion to the severity and length of the operation and the condition of the patient. It is chimerical to hope that the present operative mortality will ever entirely disappear, although in the future it may still be lessened to a considerable degree. The present collection of cases and statistics is one of much value, although owing to the fact that the figures for the whole 20 years are grouped together it is not so valuable as it would have been if they had been divided into four-yearly periods. In this way very interesting comparisons could have been drawn between the various periods. The book contains, however, some most interesting cases fully detailed and very complete statistical tables. It is impossible for us to summarise the figures here, but for anyone in search of results the work is one of importance. The book is a continuation of works of the same kind dealing with other parts of the body which have been already published by the author.

LIBRARY TABLE.

Diphtheria: Modern Views as to its Origin, Dissemination, Treatment, and Prevention. By JOHN C. THRESH, M.D. Vict., and A. E. PORTER, M.D. Cantab. Chelmsford: John Dutton. 1901.—This is a little pamphlet of 16 pages which was compiled for the information of members of sanitary authorities at the request of the Sanitary Committee of the Essex County Council. It gives in plain and simple language information on the following points: (1) the cause of diphtheria; (2) the value of bacteriology in detection and diagnosis; (3) the value of antitoxin as a curative agent; and (4) the use of antitoxin in the prevention of the disease. The pamphlet should be exceedingly useful in explaining reasons for isolation and certain forms of treatment to those who naturally enough do not understand such matters at first. Any sensible man who has doubts as to the infectiveness of diphtheria, as to the need for isolation, or as to the value of the antitoxin treatment will have his doubts set at rest by reading the pamphlet. There are, of course, those who, like the rich man's brethren, would not be converted though one rose from the dead, and to such the facts stated will not naturally appeal, but to the ordinary mind they will carry conviction.

Sexual Debility in Man. By F. R. STURGIS, M.D. London: Rebman, Limited. 1901. Pp. 432. Price 12*s.* 6*d.*—"To the sexual cripples of the United States whose infirmities have in part contributed to his support, this book is gratefully dedicated by their obliged friend, the author." This is the dedication of Dr. Sturgis's book and one which, we think, is unfortunate. For those to whom a book is dedicated are generally supposed to read it, and yet Dr. Sturgis says in his preface that the principal reason for writing it "is to introduce to the reading medical public sundry opinions." We really can see no reason why the book should have been written at all. The author's views upon the points mentioned in the preface are certainly sound, but there is nothing new in them. No medical

[1] THE LANCET April 3rd (p. 933), 10th (p. 1005), and 24th (p. 1131), and May 1st (p. 1187), 1897.

man nowadays believes that masturbation, albeit a degraded and unclean habit, leads to such appalling mental and physical degeneration as is set out in quack pamphlets, neither does any believe that spermatorrhœa and the ordinary physiological seminal emission to which any healthy man leading a continent life is liable are the same thing. Why, then, write a book to make clear these points? Possibly, however, Dr. Sturgis wishes his friends, the sexual cripples, to read his book: if this is so he should not have filled the work with what we must call dirty stories. To our minds the publication of the book involves Dr. Sturgis in this dilemma: if it is meant for the medical profession there is nothing in it new or which, we should imagine, every medical man does not know; if he intends it for the sexual cripple there is a great deal too much matter and that of the wrong kind. If Dr. Sturgis reprinted very briefly his views on masturbation and nocturnal pollutions and published these views separately he might be the means of saving the ignorant and foolish from the den of the sexual quack. But as a contribution to medical literature the book is worth nothing.

Rodney Stone. By A. CONAN DOYLE. London: Smith, Elder, and Co. 1901. Pp. 366. Price 6*s.*—This is a new edition of Dr. Conan Doyle's delightful story which was first published in 1896. So many people have read the book that we need not say much about it here, except that if anyone wants a well-written story full of incident and dealing with an interesting period he cannot do better than select "Rodney Stone." We wonder if it has ever occurred to the author to turn his book into a Drury Lane drama. The incidents of the prize-fight, the race from Brighton to London, and the closing scene where the wicked nobleman is fetched away by Old Nick in the shape of bailiffs would appeal to a popular audience.

The Column: A Novel. By CHARLES MARRIOTT. London: John Lane. 1901. Pp. 468. Price 6*s.*—This is a very cleverly written and, at the same time, a most aggravating book. It is scrappy and indeterminate, neither is there any definite plot; but it is full of cleverly drawn characters, none of whom, however, has much to do with any other. The most interesting one from our particular point of view is Dr. Caspar Gillies. He is a very original person and, we should say, would be hopelessly unsuccessful as a practitioner, but he must have been a genius, for he managed to make a little village orchestra play the B minor symphony of Schubert. Daphne, the chief female character, is a curious survival, a modern pagan, addicted to bathing with nothing on and to sitting in a dreamy unconscious state by an old Doric column which had been brought from Greece by her father, a famous Hellenist with a quaint family history. She first came into contact with the offensive prig whom she married—an exceedingly clever portrait, by the way—when playing the viola near this column at night while he lay beneath it with a broken leg. It is clever of Mr. Marriott to have given Daphne a viola to play, for that curious instrument, with its thin, sad tone, with its disproportion between its body and its scale, is an apt likeness of Daphne, who never seems to have been happy except when out of the body in one of her quasi-cataleptic intervals. We note, too, that just before she committed herself to the sea she deliberately bade the instrument farewell after having cut its strings—an act which, if it implies anything, implies an association in Daphne's mind between her personality and her viola. Mr. Marriott is evidently a young man as well as a young writer. Let him try to forget Meredith, Henry James, and Nathaniel Hawthorne; let him write another book with a plot and in a style of his own, and we dare to say that with his power of character-drawing it will be a really good work.

Analytical Records
FROM
THE LANCET LABORATORY.

NUTRABIN.

(FLETCHER, FLETCHER, AND CO., HOLLOWAY, LONDON, N.)

NUTRABIN is a rich proteid food made, as it is stated, with the proteids of milk and beef. Moreover, it contains the peptonic and pancreatic enzymes which are calculated to convert the proteids into assimilable proteoses. The preparation contains a relatively small proportion of carbohydrates and very little fat. Our analysis was as follows: moisture, 9·90 per cent.; mineral matter, 4·16 per cent.; proteids, 60·00 per cent., equal to nitrogen, 9·59 per cent.; fat, 1·20 per cent.; and carbohydrates, 24·74 per cent. The ash contains over 50 per cent. of soluble salts, chief amongst which is the dietetically important salt, phosphate of potassium. The proteids are for the most part in a soluble form, cold water extracting no less than 32·40 per cent. of the preparation. Doubtless a greater proportion than this is soluble in warm water. The greater part of the proteid matter is evidently derived from milk, for the cold water extract behaves like a solution of casein. Nutrabin is a cocoa-coloured powder possessing a strong vanilla flavour and odour. For use it is prepared much in the same way as cocoa. The flavour would not be regarded as agreeable by everyone, resembling that of a weak cocoa infusion associated with vanilla. It is undoubtedly a good nutrient, especially available for those cases in which the powers of nutrition and assimilation are weak.

NORFOLK CIDER (STILL).

(W. GAYMER AND SON, ATTLEBOROUGH.)

We have received two specimens of still cider in bottle, one described as very dry and the second as first quality dry. The results of analysis of the first were as follows: alcohol, by weight 5·25 per cent., by volume 6·55 per cent., equal to proof spirit 11·49 per cent.; extractives, 4·71 per cent.; ash mineral matter, 0·27 per cent.; volatile acidity reckoned as acetic acidity, 0·14 per cent.; fixed acidity reckoned as malic acid, 0·42 per cent.; and sugar, 0·25 per cent. The results of analysis of the second sample were as follows: alcohol, by weight 5·25 per cent., by volume 6·55 per cent., equal to proof spirit 11·49 per cent.; extractives, 5·88 per cent. mineral matter, 0·29 per cent.; volatile acidity equal to acetic acid, 0·19 per cent.; fixed acidity equal to malic acid, 0·38 per cent.; and sugar, 2·90 per cent. Both were excellent specimens of cider in perfectly sound condition and with delicate apple-like odour and acid flavour. The "dry" specimen might easily pass for a light Sauterne wine. Cider is a well-known wholesome beverage when sound and free from excessive acidity, as is the case with the specimens before us, and there are many who would prefer the still variety to the sparkling. An excess of carbonic acid gas is not always desirable. These specimens are similar to the sound cider drawn from the barrel. We could trace no objectionable preservatives. It is interesting to add that cider contains volatile ethers of the same character as those present in wine. We found in the "very dry" specimen before us that the volatile ethers amounted to 1·4 parts per 10,000. Lastly, the mineral matter of cider is rich in potash salt which when ignited produces potassium carbonate. This fact may account for the reputed value of cider as a beverage in gouty and rheumatic conditions.

PORCHERINE.

(PORCHERINE, LIMITED, 11, QUEEN VICTORIA-STREET, LONDON, E.C.)

"Porcherine" is described as a new sweetening product and the discovery of a French chemist, M. Porchere. A specimen

which we received was a somewhat syrupy liquid with a most intense and persistent sweet taste. It is evidently the sodium salt of a coal-tar derivative. Both the ammonium group and the sulphonic group are present in the substance. On evaporating the liquid and igniting it an ash of sodium sulphate was left behind and the fumes possessed an aniline-like odour. On heating with soda lime "Porcherine" gives off ammonia freely. On adding dilute acid to the fluid a dense white substance separates which is probably the prime material. This dissolved in soda gives the fluid "Porcherine." From a number of investigations made in France "Porcherine" would appear to be without injury to health. The fluid is said to possess a sweetening power 250 times greater than sugar. It is suggested as a convenient sweetening agent for the use of the gouty and diabetic and for the purpose of sweetening confectionery, jams, mineral waters, &c. Its sweetening power is certainly remarkable.

EGYPTIAN FOOD.

(W. SYMINGTON AND CO., BOWDEN STEAM MILLS, MARKET HARBOROUGH.)

As is well known, the lentil is remarkably rich in proteids, more so than the pea or the bean, and further it is decidedly more digestible. The preparation before us is made from the best Egyptian lentils which are superior dietetically to any others. The food is well prepared and consists of a perfectly uniform flour. It possesses the characteristic flavour of the freshly-ground lentil, a flavour which, like that of coffee, may easily be sacrificed during the process of manufacture or preparation. The nourishing qualities of this food are unquestionable and we are glad to note that the manufacturers describe exactly what the food is upon the label of the tin, and this description according to the results of our examination is accurate.

NONPHOSS WAX VESTAS.

(THE NON-POISONOUS STRIKE ANYWHERE MATCH SYNDICATE, LIMITED, 37, WALBROOK, LONDON, E.C.)

We have carefully examined these matches and we find that they are entirely free not only from the ordinary yellow phosphorus but from any kind of phosphorus. Amongst the ingredients which the heads contain are chlorate of potash and sulphur, the energetic chemical action of which is tempered by the presence of another body. It is satisfactory that makers have been stimulated under the pressure of public opinion to prepare a match which will not be injurious to the operatives employed in its manufacture. Further, the matches on ignition do not give rise to injurious phosphorous fumes. We cannot concede that the "nonphoss" match is as satisfactory from the point of view of striking as is the phosphorous match. Although it is true that it strikes anywhere it is not easily ignited and when ignition does occur it is accompanied with some splutter. The match certainly strikes best on the sand-paper rubber. However, we would most heartily encourage the production of such a match as great mischief has been done by the methods of manufacture hitherto adopted which involved the use of phosphorus.

(1) EXTRA STOUT; AND (2) INDIA PALE ALE.

(WHITBREAD AND CO., BRITANNIA-STREET, KING'S CROSS, LONDON, W.C.)

These bottled beers present the undoubted advantage of sparkling with the gas developed in the fermentation of the beer itself and not with added gas. We pointed out in THE LANCET of March 23rd, p. 882, that the sparkling quality of many beers upon the market depended not upon the gas generated in the beer itself by normal fermentation, but upon artificial gas forced into the liquid in the same way as soda water is made. We believe that such carbonated beer is not so wholesome or dietetically so satisfactory as is beer charged with its own natural gas. We have had the opportunity of witnessing the bottling beer process as carried out at Messrs. Whitbread's bottling factory. The beer is bottled at just that time when it will develop sufficient gas, and no more, to make the beverage agreeably sparkling. The result is a beer which is free from the sharp, harsh taste of carbonic acid artificially forced in. In the latter case the beer soon gets flat, while in the former the beer keeps its sparkling qualities for some time, a point which we believe is in favour of the digestible qualities of the beer. The analyses of the two specimens were as follows: extra stout—malt extractives, 7·31 per cent.; mineral matter, 0·35 per cent.; alcohol, by weight 5·44 per cent., by volume 6·78 cent., equal to proof spirit 11·89 per cent.; and proteids, 0·61 per cent. India pale ale—extractives, 3·01 per cent.; mineral matter, 0·21 per cent.; and alcohol, by weight 4·94 per cent., by volume 6·17 per cent., equal to proof spirit 10·81 per cent. The excellent proportion of malt extractives in the stout makes it undoubtedly a nutritious beverage and it is also easy of digestion. Both beers were in fine condition and were free from undue acidity and any objectionable constituents.

ABBEY'S EFFERVESCENT SALT.

(THE ABBEY EFFERVESCENT SALT CO., 144, QUEEN VICTORIA-STREET, LONDON, E.C.)

We have carefully examined this effervescent saline preparation and we find that it is quite free from objectionable ingredients. A feature of the salt is its remarkably uniform granulation, which while tending to preserve its effervescent qualities secures a steady effervescence when it is dissolved in water. The powder thus treated does not bubble or froth inconveniently and so the effervescing solution is comfortable to take. The powder is agreeable in character and of approved composition, and is evidently prepared from pure and refined salts. It is quite free from the contaminations sometimes found in effervescent powders of a similar nature and composition.

New Inventions.

PAGENSTECHER'S CELLULOID THREAD.

THE introduction of this thread is a decided advance in operative surgery, especially in abdominal surgery. The fine thread is the ideal suture for peritoneum as in the operation of gastro-enterostomy; it does not slip, is easily threaded, and it is easy and supple to stitch with. The tensile strength of the thread in proportion to its calibre is astounding, the strength is if anything increased by the process of sterilisation. There is only a slightly appreciable swelling of the thread after boiling it; any water absorbed by it can be withdrawn by preserving the thread in alcohol. Some months of experience with the thread have not given rise to any anxiety or complication. There is every reason to believe that although the thread is not absorbed yet it soon gets organised over and buried with an aseptic burial by the neighbouring tissues. The thicker thread is useful for ligating a large blood-vessel or a pedicle, for instance in the operations of hysterectomy, ovariotomy, and radical cure of hernia. The thread may be boiled many times without undergoing any deterioration and should entirely supersede silk as it is cheaper, more reliable, stronger, and more easily worked with. The following method of sterilisation is recommended. From the hank obtained cut suitable lengths of thread and wind them on a glass reel. Boil for 20 minutes. Take the reel out with sterilised forceps and drop it into a wide-mouthed bottle containing 5 per cent. of phenol in methylated spirit. There the thread can be preserved indefinitely. The thread may be obtained from Messrs. Reynolds and Branson, Limited, Leeds.

BERTRAM C. STEVENS, M.B., B.S. Durh.,
Leeds. M.R.C.S. Eng., L.R.C.P. Lond.

*** It seems to us that the fibre is not celluloid although apparently it contains celluloid, but though smelling strongly of camphor it is not very inflammable.— ED. L.

THE LANCET.

LONDON: SATURDAY, APRIL 20, 1901.

The Port of London.

THE doings of the Port of London are always of interest both by virtue of their magnitude and of the importance which attaches to the proper carrying out of the precautionary measures against the introduction of disease. At the present time, when a large number of invalids convalescent from enteric fever are returning from the Cape, and when bubonic plague appears to be spreading in South Africa, it is a matter of great public concern that all practicable measures should be taken to reduce the chances of infection through transports. The importance of this matter is referred to by Dr. W. COLLINGRIDGE, the medical officer of health of the Port of London, in his last half-yearly report. It appears that the authorities at the War Office were anxious that invalids returning from the Cape should be allowed to pass up the river and to proceed to Woolwich and the Local Government Board were asked to give their sanction to this. As an outcome of this request a conference was held at the Local Government Board Office between representatives of that department, of the Admiralty, of the War Office, and of the Port of London, and as a result it was arranged that in future all transport vessels are to call at Southampton, by which means the infectious sick can be removed to Netley Hospital. The vessel conveying the sick will then be disinfected by the Southampton Port Sanitary Authority who will furnish a certificate to this effect before she proceeds to her destination. These arrangements apparently apply to diseases other than plague, cholera, or yellow fever, cases of which will be dealt with in the usual manner under the Orders of the Local Government Board. It is satisfactory to hear that an amicable arrangement has been arrived at and that the port sanitary authorities will continue to deal with transports as with other vessels. As far as we are aware neither the Admiralty nor the War Office have at their disposal adequate means for dealing with an infected vessel in the manner in which such a vessel is dealt with by our port sanitary authorities, and it is clearly in the interest of the public health that administration with regard to ship-borne disease shall be focussed in the public health department of the country. Were the Admiralty or the War Office to practise quarantine foreign nations might find some difficulty in reconciling the teachings of our country with our practice.

With regard to plague the proceedings taken in the Port of London in the direction of the control or destruction of rats is a matter of consequence, and Dr. COLLINGRIDGE embraces in his report an interesting and judicial *résumé* of our present knowledge as to the relation of plague in rats to plague in the human species. He also furnishes reports contributed by the several London dock companies setting out what are the actual precautions taken in respect of rats. Vigorous as some of these measures are they do not, as Dr. COLLINGRIDGE observes, altogether suffice to ensure safety, and he gives an interesting account of experiments made by Dr. DANYSZ of the Pasteur Institute in the direction of exterminating rats by means of an organism which for rats is pathogenic but for man harmless, the organism in question having been isolated by Dr. DANYSZ from field-mice suffering from an infectious malady. The steps by which this experimenter accentuated the virulence of the microbe are full of interest and the results of his work are decidedly promising. Perhaps the most remarkable results were those obtained by placing 200 rats in a limited section of one of the Paris sewers. Cultures of the bacillus were distributed in the sewer, and eight days afterwards an epidemic broke out amongst the rats which proved fatal to 80 of them. Half of these were examined and lesions typical of those produced by the bacillus were detected. The remaining 40 which were left in the sewer were eaten by the survivors. At a later date only eight live rats were found, but, unfortunately, these escaped. Apparently the virulence of the organism becomes considerably reduced after two or three passages through the economy of the rat, and hence there are limitations to the destroying power of the virus. It is, however, recommended that repeated distributions of cultures should take place, preferably during the breeding season. Dr. COLLINGRIDGE has arranged for a supply of the culture with a view to test its applicability, and we shall all watch the results with the greatest interest.

With respect to the condition of the Thames it is discouraging to learn that there were many complaints during the hot weather. Although the Corporation of London has no immediate concern with the treatment of the sewage adopted at Barking and Crossness the condition of the river is obviously matter for the port sanitary authority, seeing that the health of an enormous seafaring population is in question. Dr. COLLINGRIDGE tells us that the methods adopted are adequate to prevent serious nuisance during the greater part of the year, but during the hot weather something further is needed. During 10 days in July the water from London Bridge to Erith, and more particularly between Greenwich and Crossness, was "very discoloured and offensive." Clearly the effluent is carried up by the spring tides a long distance above the outfalls.

Rhythmic Psycho-neuroses and Morbid Impulses.

DR. C. H. HUGHES of St. Louis, editor of the *Alienist and Neurologist*, in a paper which we publish this week on page 1124, calls attention to certain interesting and medico-legally important forms of mental derangement characterised by a morbid rhythmic activity of the brain and grouped by him under the heading "Autopsychorhythmia," or repetition psycho-neurosis. He refers at the outset to a pathetic story of an accountant who in a state of nervous exhaustion and mental confusion was carried to an asylum pitifully exclaiming, "Once one is two, once one is two," the mistaken calculation having ruined him.

Apparently two factors are concerned in the development of such form of mental derangement—viz., a basis of cerebral exhaustion or of feeble will on the one hand, and a rhythmic recurrence of irresistible morbid ideas or impulses to action on the other. Some cases manifest themselves under the forms of imperative ideas of a ludicrous, dangerous, or indecent nature which arise regardless of time or place and cause the sufferer much trouble and anxiety. French observers have given to this class of phenomena the apt term "mental obsession." A special variety of this, known as "blasphematory mania," was noticed long ago by VERGA who described it as a form of mental obsession in which the mental impulses took the form of oaths, blasphemies, or indecent utterances. The term "coprolalia" has since then been proposed by GILLES DE LA TOURETTE to designate this impulsive and, as it were, explosive ejaculation of oaths and obscene words. It is not a form of insanity to which the wicked and the depraved alone are prone, for young persons brought up and reared in exemplary surroundings—daughters of clergymen and ladies of good birth and breeding—have been not infrequently known to be subject to this form of mental disorder.

The late Professor CHARCOT regarded these impulses, like the *tics* of the neurasthenic, as closely allied disorders: "The *tic*," he said, "is a disorder that is only in appearance material; it is on the other side a psychical disease, for there are mental as well as bodily tics." A less distressing class of the repetition psycho-neuroses includes echolalia and allied conditions, in which there is an irresistible tendency to imitate and to repeat words and gestures. It must be remembered, however, that the condition of rhythmic repetition of acts and of words and phrases has a certain relation to physiological states. In persons with a fine musical ear tunes and musical cadences once heard will sometimes persistently recur in the mind even to the point of weariness. The overworked student of music is prone to suffer from this trouble, and only rest, recreation, and a tonic treatment will cure it. It is easy to see how overwork and mental overstrain will allow this condition to become a morbid one, and how the resulting cerebral irritation, insomnia, and constitutional disturbance will lead the person into the realm of actual mental aberration. These are the cases which early diagnosis and early treatment could prevent from passing into utter mental breakdown. In the borderland which separates sanity from insanity a whole host of semi-morbid conditions are met with which are characterised by tendencies to morbid impulse and repetition. Many of these have been studied and appropriately named; thus we have arithmomania, a morbid tendency to count letters in a word or objects in a room; the *folie du doute* and the *délire de toucher* of French authors, and the *Grübelsucht* or metaphysical mania of German observers. The subject of this last condition asks questions, propounds problems, and suggests doubts *ad infinitum*. Is he theologically inclined, then he reasons in every conceivable way about the creation, angels, or predestination. Was the world created, or did it come by chance? If created, did GOD do it or did he appoint the angels to do it? And if so, why? In a similar fashion the accountant conceives the idea that his books are inaccurate, he spends hours in seeking for a possible error, is never satisfied that his figures are correct, and is finally obliged to give up work owing to the danger of mental breakdown. The will is primarily feeble in these persons or has become enfeebled by disease, and ideas arising in the mind run their course unchecked. In some patients the morbid impulses towards words and deeds have their starting-point in dream states and run their course in the waking state. This is especially so in alcoholic subjects.

Dr. HUGHES calls attention to a significant group of symptoms which may be the warning of a threatened mental attack—viz., absent-mindedness, abstraction, and a condition which, since its description by the late Dr. W. B. CARPENTER, has been called "mental automaticity." Such symptoms signify little unless they are progressive or indicative of disregard towards the decencies and proprieties of life. If associated with excesses of sexual or alcoholic nature they should always cause suspicion and the mental condition of the patient should then be looked into closely. In some persons inquiry reveals the fact that for years a struggle has been going on between the normal self and morbidly recurring obsessions and impulses. Impulses to acts of the nature of murder, arson, and rape have been known to exist for years and to have been fought against with prayers and struggles. The persistence and recurrence of such internal conflicts eventually produces mental exhaustion; and on a basis of such exhaustion hallucinations and automatic acts may develop. The underlying cerebral condition is twofold—viz., a weakening of the psychical inhibitory functions and an over-action of certain sensorial areas. In every case there is more than a mere motor or kinæsthetic involvement. The disease is therefore a complex one and demands the utmost care and skill in treatment.

Recreative Reading.

THERE will be found in another column a letter from a retired member of the medical profession asking to have the names of good novels recommended to him. The request is one that we have never had made to us before and we should be very embarrassed if we thought that it came within our scope to give him an answer. His statement that he is familiar with certain accepted classics debars the suggestion to him of any of those prose works of imagination which are the chief and peculiar glory of English literature; while the absence of all limitations in his request—of all hint as to the style, the school, and the date that he would prefer—renders it impossible to select for him from the usual grade of popular fiction any group of books that would be especially likely to suit his taste. But while we have been unable to give our correspondent any practical help, he has our best sympathy in his desire to drink in his retirement from a sweet well of enjoyment which he has hitherto left untried; and not only our sympathy but our envy. The hours that he has before him making the acquaintance of LEVER'S and OUIDA'S guardsmen, MARRYAT'S post-captains, BRADDON'S and COLLINS'S villains, AUSTEN'S nubile heroines, and TROLLOPE'S troubled clergy—we omit reference to the accepted classics—will be some of the pleasantest that he has ever spent.

We do not, however, advise medical men to leave all light reading until the time of retirement from active work has come. On the contrary, no man needs recreative reading more than the busy medical practitioner or is more likely to derive from it valuable intellectual distraction. The absorbing character of medical work and the scanty leisure of medical life are alike inimical to the cultivation of tastes and accomplishments which call for prolonged application. Here and there a medical practitioner is an expert musician, a poet and one or two novelists have their places upon the current Medical Register, and several well-known surgeons have shown that it would have been within their power to earn a position as artists had not previous predilections led them to surgery. These men are, however, exceptions to the rule, while they do not necessarily remain constant to their professional career. The rule for medical men is not to find much time for the cultivation of the arts, which makes it particularly valuable to them not to neglect any opportunity which may present itself. And the most obvious opportunity is to use a portion of their scanty leisure in the study of good literature outside purely professional lines. The daily duties of the average practitioner involve little reading, so that he can, if he can make the time, find reading exactly the relief which his monotonous life calls for. The barrister, the clergyman, and, of course, the literary man—callings which make up between them with the medical man what may be termed the learned professions—have constant recourse to books. Books are no change to any of these save to the medical man. And although it is notorious that the *littérateur's* idea of recreation is to read a book, it is equally obvious that for medical reasons he would be much better employed anyhow else, even in playing ping-pong; but to the medical man, especially to the hard-worked general practitioner, books which deal with phases of life outside his daily routine appeal with extraordinary freshness, inasmuch as an opportunity for reading them occurs with such little frequency.

We have no intention of suggesting a choice of recreative reading. The terrible nonsense that was written at the time when certain of our lay contemporaries were discussing the merits of the best 100 books would deter us from making any such attempt, even if we felt that the post of literary adviser to the medical profession were one to which we could aspire, which we do not. The mental attitude and intellectual needs of individuals are as varied as their physical features and cannot be adequately met by any process of arbitrary selection. History, philosophy, poetry, and fiction have each their place in recreative reading and their value cannot be adjudged in accordance with any abstract or artificial standard, but must vary with the intellectual tastes of the reader and with his literary grasp. Many thoughtful men hold that more abiding satisfaction, more true solace from the troubles of the day, can be obtained from the repeated study of some great classic than from the perusal of the ephemeral literature of the day. We think that this is as obvious as it is true, but it does not get over the difficulties that everybody is not agreed as to what is a masterpiece, while everybody does not want to read masterpieces without a break. There is room for the occasional reading of books which, though they are not and never will be classics, give cause for thought or distract the weary mind. The well-read man, the man who is soundly acquainted with great literature, will very generally be able to point out that the good things in any new book are evolved from, derived from, or founded on the good things written by old masters. But the modern way of putting a good thing, by its very modernity, may make the good thing more convincing. To despise a book because it is new is as silly as it is to read nothing but trash because it is new.

Annotations.

"Ne quid nimis.

QUEEN VICTORIA'S NURSES' ENDOWMENT FUND.

THE trustees of Queen Victoria's Nurses' Endowment Fund in a letter to the press appeal very powerfully for an adequate endowment "once for all" of the Fund. Our readers probably know that this Fund originated in the sum of £70,000, the jubilee offering made by English women to Queen Victoria, which was handed over with characteristic benevolence by Her Majesty to "Queen Victoria's Institute for Nurses," the object of which is to train nurses to attend the sick poor in their own homes. Her Majesty took the greatest interest in the work and in the nurses who were trained in the institute. The trustees tell us that there are now 900 Queen's nurses nursing the poor in their own homes in all parts of the United Kingdom, and if only sufficient funds were forthcoming no town or district would be without a nurse. The memory of the Queen is secured in many ways, but in none more appropriately or benevolently than by this Fund, the object of which expresses that element of human tenderness which has endeared her to her own people and to all other peoples in the world. The trustees are a thoroughly representative body and may be trusted to see that no distinctions of creed shall interfere with the help offered by the society to those whose poverty and sickness make them fit objects for its benefits. They tell us that the nurses will have to be multiplied threefold before the work of the Fund is complete. We heartily commend the appeal. Nothing emphasises the kindliness of Queen Victoria's nature more than the foundation of this Fund, and nothing can honour her memory more than a generous response to the trustees. Subscriptions may be sent to Mr. Howard Morley, honorary treasurer Queen's Nurses' Endowment Fund, 64, Cannon-street, E.C.

SWEETS SPARKLING WITH GLASS.

THE production of modern sweets is undoubtedly a fine art judging from the innumerable varieties made and the countless ways in vogue of making them attractive. At one time the most deplorable practice prevailed of employing such poisonous substances as chromium, lead, copper, or even mercury and arsenic, as colouring agents in sweets. Mainly, however, owing to the disclosures of THE LANCET Analytical Sanitary Commission in 1854, the use of such objectionable colouring agents became happily obsolete, and, speaking generally, modern confectionery is now pure. According to our laboratory experience of recent years we have not found any objectionable ingredients of this character in sweets. True, the colouring agent is often an aniline dye, but so great is the tinctorial power of such dyes that it is probable that several pounds of the sweets would contain at most a few grains of the dye and then the dye may be erfectly harmless. It is satisfactory to state that many

sweets are coloured with vegetable colouring, such as the chlorophyll of spinach, known as spinach-green, which is now made in large quantities for many commercial purposes. So far this account of modern sweets is satisfactory, but a somewhat unexpected and most objectionable method of manipulating sweets has just been brought to our notice. Sweets are made to glitter by means of splinters of glass, so that the sweet has the appearance of sparkling crystal sugar. We have in our laboratory at the time of writing some specimens of even high-class confectionery, said to be of French make, which all contain a liberal sprinkling of glass splinters. When the sweet is dissolved in warm water the splinters tumble to the bottom of the fluid into a miniature heap of broken glass. The splinters present both sharp points and sharp edges which are eminently calculated to cause an injury to the walls of the digestive canal. It is difficult to imagine a more powerful mechanical irritant than jags of glass which might easily cause laceration and hæmorrhage, not to mention other disturbances such as are set up by foreign bodies less jagged than glass in the alimentary canal. The sweets to which we have referred were sent to us by a correspondent with a request for analysis, and he relates that these sweets were partaken of by two little children who shortly afterwards suffered from severe abdominal pain, in the one case in the region of the appendix. The pain persisted for several days. The effect of sharp glassy particles lodging in the appendix could, of course, be easily disastrous. Our analysis enables us to say most positively that these glittering particles are glass. They are quite unchanged in boiling water or in boiling acids and melt into beads at a red heat. On analysis we obtained silica, lime, soda, and a little lead, which are the constituents of common glass. From their appearance on the sweets the flakes might easily be taken for gelatin or mica. The glass is probably prepared by crushing glass bubbles. It is said that the practice of employing glass in this way for decorating confectionery is extensively resorted to, especially by French makers. The sale of such sweets should render the seller liable to heavy penalties or, better, to incarceration, for broken glass may act exactly as an irritant poison and is most injurious to health. We trust that the Local Government Board will give attention to this matter in order that the local authorities throughout the country may by means of the machinery of the Food and Drugs Act institute practical inquiries and stop the sale of such dangerous articles. It is probable that the practice is adopted in order to compensate for the absence of any crystalline appearance in glucose which is now so much used as a substitute for cane sugar in confectionery. In such a case the practice is not only monstrous because it is likely to lead to serious injury to health, but because it is a fraud also. Sanded sugar was bad enough, but to put glass splinters in sweets is diabolical.

THE BRITISH SCHOOL IN ROME.

"AN Italian Contributor," under date, Rome, April 12th, writes: "Medicine with her sister faculties of law and divinity was duly represented in the brilliant gathering assembled yesterday in the Palazzo Odescalchi to launch the British school and, metaphorically speaking, to break a flask of 'bottled sunshine' over its bows. Lord Currie, His Majesty's Ambassador at the Court of the Quirinal, presided and the company included the Archbishop of York, the heads of the German, French, Austrian, and American archæological schools respectively, Mr. H. F. Pelham, President of Trinity College, Oxford, and Camden Professor of Ancient History in the University of Oxford; the Cavaliere Lanciani, Professor of Roman Topography at the Sapienza; the Commendatore Boni, Excavator-in-Chief of the Forum Romanum; the Contessa Lovatelli-Caetani, the accomplished archæologist representing the Royal Academy of the Lincei; and a numerous attendance of graduates from the Universities of Oxford, Cambridge, Edinburgh, Aberdeen, and St. Andrews. Lord Currie briefly indicated the origin and aim of the school, and paid a well-merited and loudly applauded tribute of praise to Professor Pelham, the chief promoter of the school and chairman of the Executive Committee. Professor Pelham followed with a happy reference to the importance, the interest, and the fascination of the studies now for the first time accessible to the British student in a duly constituted and equipped British school, and after him came Professor Eugen Petersen, first secretary of the Roman Branch of the Deutsches Archäologisches Institut, and the Abbé Duchesne of the École Française, to extend the right hand of fellowship to their young rival. The speeches, all of them happy in tone and cordial in expression, had their appropriate sequel in the conversazione which followed as the company dispersed through the rooms or lingered over the well-provided buffet. Particularly gratifying to the medical contingent was the library with its assortment of books appealing specially to the student of the healing art in its historical aspects—Hippocrates being represented in the great editions of Littré and Ermerins and Celsus, in those of Milligan, Des Etangs and De Renzi, supplemented by Matthioli's fine commentary on Dioscorides and by De Renzi's Collectio Salernitana in five handsome octavos. Medical archæology, indeed, stimulated and aided by the British schools at Athens and in Rome, may now look forward to rich accessions to its treasure-trove, the methodical arrangement of which at either school and its adequate description by the local expert cannot but add interest and attraction to many a 'Physician's Holiday.' The names of men of light and leading in the profession—Arbuthnot, Mead, Heberden, and Gregory, and the more recent ones of J. Y. Simpson, Francis Adams, B. W. Richardson, and Henry Acland—recur to the mind as those of ardent students of the medical past who would have envied their latter-day successors the opportunities and facilities open to them, and whose spirits may well be imagined to look down approvingly on the new adjunct to their favourite studies so auspiciously inaugurated in the British school in Rome."

DOWLING v. DODS.

IN another column will be found an appeal signed by various well-known members of our profession, asking medical men to assist Mr. Louis Ferdinand Dods to pay the heavy costs to which he was put in defending himself in the action for libel brought against him by Miss Agnes Dowling. It may be remembered that in the original action a jury required Mr. Dods to pay £100 damages to Miss Dowling, but on appeal judgment was set aside and a new judgment was given for Mr. Dods with costs, the later result being obviously in accordance with the justice of the case. These costs Mr. Dods has been unable to recover from Miss Dowling, and he finds himself liable for a sum of over £400. We have already laid before our readers details of the case[1] but we may shortly recapitulate them here. Mr. Dods, having the behaviour of Miss Dowling brought to his attention, wrote a letter to the relieving officer of the Paddington district to the effect that to the best of his knowledge and belief Miss Dowling was of unsound mind. The relieving officer revealed the contents of the letter and Miss Dowling brought an action for libel against Mr. Dods. At the trial Mr. Dods's letter was held to be privileged, but the jury found evidence of malice and of want of reasonable care on his part. They also found that he had not spoken correctly

[1] THE LANCET, June 23rd (p. 1812) and Nov. 10th (p. 1362), 1900.

in saying that the plaintiff was of unsound mind and that it was not true that she would be a source of danger as a dispenser, but that it was true that she had hallucinations. They gave their verdict for Miss Dowling, awarding her £100 as damages. Miss Dowling certainly had hallucinations, and hallucinations of a pronounced sort. Thus she charged a lady with taking her soul from her by diabolical practices, and she admitted in court that being in Ireland she distinctly heard the voice of a Dr. Groves, who was at the moment in the Isle of Wight. How a dispenser liable to such flights of imagination could be other than a source of danger to those for whom she dispensed we cannot imagine, and it seemed amazing to us that a medical man should be fined for taking steps in the exercise of his profession to prevent an unfortunate sufferer from damaging herself and the public. The second trial reinstated Mr. Dods in public opinion, showing the jury to have taken a hasty view, but, unfortunately, he still remains out of pocket. He was, of course, in the first instance fighting for his own hand, but he has really maintained battle for the whole of the medical profession in a disagreeable situation where, in the present state of the law, any of our readers may find themselves to-morrow. Therefore we ask our readers to give to the appeal published on page 1161 of this issue their best attention. Times are hard and the claims on the purses of the profession are heavy. But Mr. Dods has been severely fined for doing what he conceived to be his public duty and professional fraternity should see that his loss is made as light as possible.

BICYCLING IN LONDON.

FEW people, probably, except those whose work lies in hospitals realise what a large number of accidents occur daily through the use of bicycles in the streets of London. The daily press has knowledge, generally speaking, only of fatal accidents with their subsequent inquests, and the numerous cases of less serious injury escape the publicity of those papers even whose fortune so largely lies in the misfortune of others, if we may judge by the prominence which their columns give to anything of the nature of accident or tragedy. This lack of information on the part of the daily paper as regards bicycle mishaps provides a rare instance in which the absence of publicity may be deplored. In our opinion the bicycle in London is too freely used for the common welfare, and if the public generally were more fully alive to the accidents to which it gives rise its prevalence in metropolitan thoroughfares would probably diminish. We are second to none in recognising the benefits of most forms of athletic exercise and in appreciating the bicycle as placing a convenient means of muscular exertion before those who without it would be often physically idle. The medical profession, as a whole, has blessed the wheel with a wide approval, and the general opinion has had our support before now, but we maintain that there is a wide difference between bicycling for health and pleasure and riding amidst the kaleidoscopic probabilities of collision in a crowded London thoroughfare. In the first place, the value of the exercise itself is largely discounted by the fact that to ride at all fast is simply to court disaster. Even without the chance of accident from tributary thoroughfares, the traffic of a main route by its intricate packing and sudden halts, by its erratic cabs suddenly turned in obedience to a hurried whistle, by its swaying 'buses stopped at any moment, by its flurried ladies crossing at a wrong time, by its children, and by its dogs, places the bicyclist who rides fast in the imminent risk of a "spill" or a collision in which he or his machine or both will be lucky to escape with a mere fracture. The man or woman who rides fast in London is not likely to be troubled with "nerves," but there is another side to the question which affects the careful rider. He, or more especially she, is in a constant state of nervous tension. Her eyes must comprehend all that is before and on either side of her and her ears must be alive to everything behind. Her brain reels with a constant succession of hurried impressions, and through it all she must keep calm control of every muscle or her equilibrium will reel too. The concentration thus demanded of the London bicyclist has even been the very reason of its recommendation as a "nerve-tonic," and we know an enthusiastic physician who went so far as to declare that to get the fullest effect a person should ride on the wrong side of the road! The chief effect likely to be thus obtained is a short rest in the accident ward of a hospital. For young men accustomed to the prompt actions of athletic games, bicycling amidst the traffic of London may afford a sport or an exercise the risks of which are only enough to make it pleasantly exciting. For older people and for all women we believe the risks outweigh the advantages. Moreover, there are conditions under which no one should run risks. When the roads are greasy, when rain has fallen enough to make wood and asphalt sticky without making them sloppy, anyone who bicycles amidst traffic, unless necessity compels him to, takes an unwarrantable risk. He will often be so placed that the least slip puts his wheel under that of some heavy vehicle and as he leaps off his saddle into the slippery road it is mere luck if he does not fall beneath another wheel. To those who would ride in London when the roads are not properly dry, and to women who would shop on bicycles, we unhesitatingly proffer *Mr. Punch's* historic advice, "Don't." Let the Londoner who wishes to bicycle rise early and do so before the traffic of the day has begun or let him wheel his machine to one of the parks. In either case he will take exercise without risk and will breathe fresh, unpolluted air not to be obtained from the dust-laden atmosphere of crowded thoroughfares.

A CASE OF TOTAL EXTIRPATION OF THE STOMACH.

IN the *Deutsche Medicinische Wochenschrift* of April 11th Dr. A. von Bardeleben of Bochum in Westphalia publishes an account of the case of a woman, 52 years of age, whose stomach he removed in the Augusta Hospital in that town on August 28th, 1900, and whom he showed at a meeting of the Surgical Association of the Lower Rhine and Westphalia held in Bochum on Dec. 8th following. For a year previously to the operation she had suffered from pain in the stomach accompanied by nausea and eructation but without vomiting. Her appetite failed entirely, she lost 40 lb. in weight, and could only hold herself up with a great effort. A moveable tumour of the size of a fist could be felt to the left of the umbilicus. On opening the abdomen the whole anterior wall of the stomach from the cardia to the pylorus was found to be greatly thickened and densely infiltrated. The œsophagus was thereupon divided below a temporary ligature placed close to the diaphragm and the stomach, inclusive of both cardia and pylorus, was removed with detachment (*Abtrennung*) of the great and small omentum. The orifice of the duodenum was sutured, and the end of the œsophagus was attached laterally to the small intestine some distance lower down. The operation lasted 75 minutes, including disinfection, 20 grammes (three-quarters of an ounce) of chloroform being used. The subsequent course of the case was quite uneventful. On the evening of the day of the operation

the patient drank a glass of claret, and all rectal alimentation was discontinued after the third day. The food taken thereafter was limited to eggs and soup to which peptonised meat and hydrochloric acid were added. In the second week this was supplemented by potato soup, grated ham, and the like, and the patient got up on the fourteenth day, after which her appetite increased. The first motion of the bowels, which was passed on the fifth day, was quite free from biliary colouring matter, but the second and all subsequent motions were of the normal colour. After leaving bed the patient's weight increased from 67 lb. to 84 lb. The orifices of the stomach after removal included obvious portions of the œsophagus and the duodenum. Microscopical examination showed the tumour to be colloid cancer (*Gallert-carcinom*). Dr. von Bardeleben appends a list of surgeons who have recorded cases of total extirpation of the stomach, the names being as follows: Hemmeter, Brigham, Nolle, Faure, Schlatter, Panchel, Leersum and Rotgans, de Carvalho, and Boeckel. With regard to the case of Professor Schlatter he quotes THE LANCET of Nov. 19th, 1898, page 1314, and with regard to that of Dr. Vieira de Carvalho THE LANCET of Sept. 15th, 1900, page 798.

A WATER COMPANY DIRECTOR ON CISTERNS.

THE last half-yearly meeting of the shareholders of the East London Waterworks Company was held on April 4th, when Mr. Frederick Tendron, chairman of the Grand Junction Waterworks Company, expressed his views on cisterns, of which he advocated the use. According to the *Times* report of his speech, "there ought," he maintained, "to be a moderate-sized cistern in every house, although *cistern water ought never to be drunk.*" (The italics are ours.) "If there was one thing more than another that should be insisted upon," he continued, "it was that in every house a tap shall be fitted on the rising main so that the water which was hourly being renewed should be drunk fresh from the main." As a matter of fact, unfortunately, both the Lambeth and the East London companies have at certain periods during the last few years not hourly renewed the water in their mains. Let us suppose for a moment, for the sake of argument, that Mr. Tendron's statement was strictly accurate. If the water were hourly renewed in the mains, and if, moreover, water from a cistern ought never to be drunk, on what reasonable ground does Mr. Tendron recommend the reinstatement of the domestic cistern?

THE PLAGUE IN SOUTH AFRICA.

WAR and pestilence have frequently been contemporaneous, only as a rule the latter is a consequence of the former. The present epidemic in South Africa, however, appears to be unconnected, at any rate directly, with the war. In Cape Town the usual difficulties have to be faced which are always present in the case of a town containing a population of varied nationalities, races, and creeds. In such a case, religious and other scruples make the work of isolation and other measures necessary for the public safety hard to carry out. With regard to the disinfection and cleansing of houses Dr. Gregory, the chief medical officer, has issued explicit instructions to his staff. Yards, drains, fowl-sheds, and other outbuildings are to be drenched with a solution of corrosive sublimate. Houses are to be first closed and then fumigated with formalin. After remaining 12 hours they are to be aired and sunned as far as possible. All articles in the house are to be divided into three classes: (1) those that can be disinfected in the house; (2) those that must be burned; and (3) those that have to be sent to the steam disinfector. Furniture and hardware articles are to be disinfected with a solution of corrosive sublimate or with another disinfecting fluid which does not spoil metal articles; walls are to be sprayed with the sublimate solution and stripped. Rat runs are to be traced and fumigated, while all rats met with are to be killed and their bodies burned. The medical officer in charge is to report upon the general sanitary condition of the house as regards drainage and the like, and is also, at the conclusion of operations, to give a certificate to the effect that the house has been properly disinfected. Concealment of cases, as in India, is apparently the great difficulty which the authorities have to contend with. As regards the progress of the disease the latest telegrams state that the matron at the Cape Town plague hospital has died from plague and that on April 17th there were 16 fresh cases recorded.

THE FACTORY GIRLS' COUNTRY HOLIDAY FUND.

ALL rightly applied efforts to promote the health of the poor toilers of our great metropolis deserve hearty support, and the Factory Girls' Country Holiday Fund, of which the Princess Christian is a patron, is the outcome of one of these efforts. Apart from the plea of humanity, the fact that many of the girls who benefit by this fund are engaged in the preparation of food should induce everyone to support the fund, for it is to the benefit of the community as a whole that food should be prepared and stored for future use by healthy operatives. To show the rapid increase of the work done by this institution we may mention that in 1888, when the first report was issued, 39 women and girls received the benefit of a country holiday, while last year 2680 women and girls were sent away from the smoke and grime of their surroundings. This number, large as it is, must represent but a small part of London's poor working girls, and even many of these could not have been sent away had it not been for the kindness of a member of the executive committee who in the middle of last summer advanced £300 when the funds became exhausted. As arrangements have to be made with the cottagers who house these girls some time beforehand it is most desirable that subscriptions should be sent to the honorary treasurer, St. Peter's Rectory, Saffron Hill, London, E.C., early in the spring. That the girls themselves appreciate the efforts made on their behalf can be seen by the letters expressive of heartfelt gratitude which are printed in the report.

THE CORONERSHIP OF THE CITY OF LONDON.

IT is announced that the coroner for the City of London, Mr. Langham, is about to retire after many years' faithful service. Mr. Langham has discharged his onerous duties with conspicuous ability, and we do not fear that we shall be suspected of disparaging his service when we hope that his successor will be a medical man. We have over and over again pleaded in these columns for the principle that the office of coroner should be held by a medical man, but in face of the near approach of this new appointment it will do no harm to recapitulate some of the arguments why a medical man should be preferred as coroner. The office of a coroner is, in the first instance, to decide whether an inquest is necessary—that is to say, he must decide whether a death is natural or unnatural, whether the cause of a sudden death is or is not unknown, and whether a death has or has not been a violent one. These questions can only be answered satisfactorily by an experienced medical practitioner—a most important point. For useless inquests are a grievous infliction upon those who have to act as jurors, while they cause much unnecessary pain to the bereaved relatives. It is argued on behalf of the theory that a coroner should be a lawyer that the coroner has not only to receive evidence but to sift it and to weigh it. But this argument applies equally to the jury and no one has ever proposed that the

jury should be composed of lawyers. Moreover, every medical man has daily in the exercise of his profession to weigh evidence received from his patients, from the patients' friends, and from the witness of his own eyes and ears. The viewing of the body is a form when conducted by a lawyer, but when conducted by a medical man the appearance of the corpse may tell him much in support of or against the evidence which will shortly be given before him. To the medical coroner the evidence of friends, physicians, nurses, and eye-witnesses as to injuries or previous illnesses will have a very real meaning, and, in addition, its relation to any undisputed facts before the court will be clear to him in a way that it cannot be clear to persons ignorant of medicine. In a coroner's court the cause of death is not, as in other courts, one issue of a suit—it is the only issue, and the coroner should be a man able to weigh medical evidence and to direct the jury. The value of medical evidence is only completely clear to a man who has had a medical education. We therefore hope that the electors in whose hands the important appointment of the coronership of the City of London rests will appoint as coroner a member of the medical profession.

M. LOUBET AS A SANITARY REFORMER.

SANITARY reformers have found a useful ally in M. Loubet, President of the French Republic. With all the courtesy necessary under the circumstances he has not hesitated to administer a well-merited reproach to the municipality of Toulon. Nothing can be more revolting and scandalous than the insalubrious condition of this town, which still serves as an open door to all the epidemics that can be imported from abroad, while within its walls typhoid fever is in an endemic condition. There are no sewers and no system of drainage; some houses have portable pails, some have cesspools, but a great many houses, even in the centre of the town, have nothing at all, and the inhabitants are content to throw out their night-soil into the streets. On his return from visiting the Italian squadron M. Loubet was entertained by the Municipal Council of Toulon. The Mayor, in his speech of welcome, admitted that for 50 years the necessity of sanitary measures had been recognised, and he asked that the President should use his influence so that something might at last be done. The Mayor, however, did not say anything about a drainage scheme which obviously is the first of necessities. He only spoke of embellishments and of building new and broader streets—schemes that obviously lend themselves more readily to jobbery than the creation of a drainage system. While pointing out that he had no constitutional right to take any initiative in such matters, M. Loubet said that on the strength of his white hair and his services rendered to France and to the Republic for more than a quarter of a century he had authority enough to recommend to the Government that the desire for sanitary reform should be realised and that the Ministers would not dishonour his recommendation. He further urged that the town could well afford to make the effort; that too strict a policy of saving would only cause greater difficulties in the future; and that they ought to put their hands into their pockets and the Government would help them in carrying out a well-matured scheme. By those who are unacquainted with the local history of Toulon the sting of these remarks will not be perceived, but those who are better informed will naturally inquire who is responsible for the present insalubrious condition of Toulon if it is not the present mayor and municipality. Many years ago a scheme for the drainage of Toulon was prepared. This scheme was sanctioned by the Consultative Committee of Hygiene for France, of which Dr. Brouardel is president, and also by the General Council of the Ponts et Chaussées. These two committees are attached to the Ministry of the Interior and represent in France what the Medical and Engineering Departments of the Local Government Board represent in England. Further, the scheme was also approved by a mixed committee representing the Ministries of War, of Marine, of Public Works, and of the Interior. Finally, and from the legislative and administrative point of view, the scheme was confirmed by the Council of State. But at this latter stage a most extraordinary event occurred. According to the law such schemes must be laid before the public of the town concerned and any inhabitant has the right to attend and to bear witness either against, or in favour of, the project. It was now found that the *dossier* containing this testimony had disappeared. It had been lost or stolen from the archives—an incident quite worthy of the Dreyfus case. The Government, tied down by the letter of the law, then insisted that, as a mere matter of form, another public inquiry should be held. This was done, but in the interval a new municipal council had come into power which in the preparing of the scheme had had no finger in the pie. The result of the public inquiry was the same as in the first instance. Out of a population of 104,000, some 1400 persons, including women and servants whipped up for the occasion, had spoken against the proposal. That the scheme is still approved by the great majority of the inhabitants of the town is proved by the recent election of M. Ferrera as representative of Toulon in the Parliament. M. Ferrera was mayor of the town at the time the scheme was accepted, and at the recent parliamentary election the carrying out of the scheme was the first plank in his programme of local reforms. Nevertheless, the present municipality made a pretext of the second inquiry and declared that, in the presence of the results of this inquiry, they would not carry out the project. The contractors who had been engaged for the works are now suing the town. Nine years have been expended over this one scheme. It has received the highest governmental and technical sanction; but because it did not originate with the present municipal majority, all this work, the negotiations, technical reports, &c., which have absorbed so much time, money, and energy are to be destroyed and lost. But for these party intrigues Toulon would to-day have possessed a suitable system of drainage. The last two cholera epidemics first made their appearance at Toulon and Marseilles; the latter town has now a general system of drainage. To-day Europe is more or less menaced with the advent of plague, and Toulon is in as bad a condition as it was during the last cholera epidemic. Well might M. Loubet urge the necessity of immediate action, but the bringing forward of a new scheme would mean years of delay.

HÆMORRHAGIC TYPHOID FEVER.

HÆMORRHAGIC typhoid fever—that is, typhoid fever accompanied by generalised hæmorrhages into the skin, mucous membranes, and serous cavities—is rare. The *American Journal of the Medical Sciences* for March contains an important paper on this subject by Dr. A. E. Eshner and Dr. T. H. Weisenberg. In hæmorrhagic typhoid fever hæmorrhage first takes place from the nose and then from the gums. Next petechiæ appear in the skin among the "spots," which become hæmorrhagic only in part, if at all. In severe cases extensive deep-seated extravasations take place into the subcutaneous tissue. In some cases meningeal or cerebral hæmorrhage occurs. There is usually melæna which is sometimes fatal. Hæmoptysis is the least common form of hæmorrhage. The earlier and the more extensive the hæmorrhage the worse the prognosis. The writers report the two following cases. A man, aged 39 years, a heavy drinker, was admitted to hospital delirious on what appeared to be the twenty-second day of his illness. He looked stupid,

his tongue was brown and fissured, and sordes were present. The temperature was 103° F. The right iliac fossa was tender. On the chest and abdomen was a rose-coloured maculo-papular rash which disappeared on pressure. The urine contained albumin and blood. The Widal reaction was positive. On the sixth day after admission there appeared on the legs a symmetrical rose-red eruption consisting of elevated patches one-eighth of an inch in diameter which did not disappear on pressure. At the same time bluish blotches, from one-eighth to one-quarter of an inch in diameter, which did not disappear on pressure, appeared on the upper chest and shoulders. There were hæmaturia and enuresis. Later in the day intestinal hæmorrhage occurred three times and the hæmorrhagic eruption extended all over the body, the spots being bluish and varying from three-quarters of an inch to one and a half inches in diameter. A hæmorrhage took place into the left cornea. The patient died comatose on the following day. The necropsy showed much blood in the peritoneal cavity, and hæmorrhages in the peritoneum covering of all the abdominal viscera. There were also hæmorrhages into the substance of the latter. The pleural and pericardial sacs contained blood. The bladder contained an enormous clot. In the ileum were five ulcers in various stages. In the second case a man aged 28 years, and addicted to alcohol, was admitted to hospital delirious. The history was that he had been ill for a week. The face was dull and expressionless and the tongue was dry and furred. The urine contained albumin but no casts. The pulse was rapid, weak, and dicrotic, and the temperature was 103° F. A rose-coloured maculo-papular eruption, which disappeared on pressure, appeared. Nervous symptoms became pronounced and carphology and subsultus occurred. The Widal reaction was positive. On the fifth day after admission the tongue was dry, brown, and fissured, and there were sordes. The conjunctivæ were icteric. On the sixth day a dark rusty-red papular eruption, which did not disappear on pressure, appeared on the chest and abdomen. The spots averaged one-eighth of an inch in diameter. Next day the limbs were involved. A peculiar offensive odour was present. Kernig's sign could be elicited. Divergent strabismus and retraction of the head appeared and the patient was extremely restless and exhibited carphology and subsultus. The urine contained albumin and granular and bloody casts. He became comatose and died on the ninth day. The necropsy showed typical typhoid lesions—ulcers of the ileum and splenic enlargement. The brain and spinal cord showed no abnormality except roughening of the membranes covering the inferior aspect of the cerebellum. The fact that in both these cases of an exceedingly rare complication of typhoid fever the patients were addicted to alcohol seems to have had no significance for the writers, but it seems to us of importance, for alcoholism is recognised as a cause of purpura by French writers, though apparently not by American. Typhoid fever *per se* is no doubt capable of producing purpura, but that the alcoholism was a contributory cause in these cases seems probable.

UNQUALIFIED PRACTICE AND DEATH REGISTRATION.

IN order to prevent the danger to the public resulting from medical practice by unqualified persons, and owing to their attention being called to the prevalence of such practice in the urban district of Spennymoor in their county, the County Council of Durham recently made certain representations to the Registrar-General and suggested to him that he should instruct the district registrars of births and deaths to report to the coroners all cases of death not certified by a qualified medical practitioner, so that the coroners might exercise their own discretion as to whether an inquest should be held or not. This after some correspondence the Registrar-General consented to do in respect of the Spennymoor district only on Dec. 1st, 1900, but, strange to say, on Feb. 13th, less than three months later, before the success of the change could be estimated, and without further reference to the county council, the Registrar-General took upon himself the responsibility of revoking his own decision and assigned as the cause of his doing so that the delay occasioned in registration caused inconvenience and that no commensurate good had been effected. At a meeting of the county council held subsequently an alderman of the council, who apparently differed from the majority of his fellows in the enlightened view adopted by them, admitted that he and Mr. J. M. Paulton, the Member of Parliament for the division, had interested themselves in the matter, and the influence brought to bear by the Member of Parliament and the alderman no doubt contributed to the rescission by the Registrar-General of his recently issued instruction. We cannot congratulate the official, the Member of Parliament, or the alderman. The last-named, in his speech to the council to which we have referred, as reported in the *Durham County Chronicle* of March 15th, revealed even more interest in the prosperity of the persons practising without qualifications than in the convenience of the miners and others to whom he also referred, while the report of the county medical officer of health, made in last July, is in our view conclusive as to the dangers resulting in the Spennymoor district from the popularity of a certain unqualified person or of certain unqualified persons practising there. In one paragraph it says: "In the urban district of Spennymoor the number of deaths last year which were uncertified as the result of such practice was 77, or nearly 20 per cent. of the total deaths, and during the first half of this year these deaths numbered 39, or 25·5 per cent. of the total deaths. During the past quarter there have been two deaths from enteric fever and one from scarlet fever which were uncertified owing to the attendance of an unqualified practitioner, and in none of these infectious cases was any intimation given to the medical officer of health of their existence, and consequently no precautions could be taken to prevent the spread of the disease." We are of opinion that such a state of affairs as that disclosed is alone sufficient to show that every step that can lawfully be taken should be taken to compel the production of a certificate of death from a qualified practitioner, and that failing the production of such certificate the coroner should be charged to inquire into the cause of death and to hold an inquest where the cause of death is not absolutely clear or otherwise demands it.

"HAMLET" IN DUMB SHOW.

THE Adult Deaf and Dumb Institute in Manchester does very useful work in keeping up a link of association and interest among deaf-mutes scattered over a large area. Some travel great distances to take part in a reunion in Manchester that has now become an annual event. This year it took place on April 6th, and some of the visitors were from Birmingham and others from Scotland. At the Hulme Town Hall there was a tea-party in the evening—they are very popular entertainments among some sections of the community in the north—followed by a performance of *Hamlet* by deaf-mutes. Probably the feeling for dramatic representation is as strong in them as in others, but to those who can hear and speak it is difficult to imagine that it can be fully satisfied by signs and gestures, more especially when they are trammelled with the rapid and complicated movements of the finger language. The performance was, however, a great success. Last year the same "actors" gave *Romeo and Juliet*, so that the success was

not altogether due to novelty. "The dressing of the play was effective, the scenery was good, and there was spirit in the acting," and "the audience, judged by their attention, felt a real concern in the development and the incidents of the play." It is pleasant to know how cheerfully and successfully these poor folks struggle against the limitations brought about by their affliction, but for all that this silent *Hamlet* must have seemed to the visitor who could hear and speak a pathetic spectacle.

THE JACKSONIAN PRIZE.

THE Jacksonian Prize of the Royal College of Surgeons of England has been awarded by the council of the College to Mr. McAdam Eccles, M.S. Lond., F.R.C.S. Eng., for his dissertation on "The Pathology, Diagnosis, and Treatment of the Diseases caused by and connected with Imperfect Descent of the Testicle."

PUERPERAL INSANITY.

DR. ARTHUR C. JELLY of Boston has published in the Boston *Medical and Surgical Journal* of March 21st an important article on puerperal insanity based upon the medical records of 250 cases of puerperal mental disturbance observed during the years 1872–1900. After referring to the great anxiety and suffering which are caused by puerperal insanity when a young mother becomes suddenly maniacal after the birth of her first child and requires to be sent to an asylum he directs attention to the possibility of prevention. Of the 250 cases referred to above as suffering from puerperal mental disturbance, in 200 the disorder was sufficiently grave to constitute insanity and to require asylum treatment. Cases of the insanity of pregnancy or of lactation were not included, the term puerperal insanity being, somewhat artificially, restricted to those who became insane within six weeks after childbirth. From an etiological point of view two distinct groups were recognised. In the first group the causes were septic infection and exhaustion, complicated in some cases with auto-intoxication. In the second group a psychopathic predisposition existed and the ordinary stresses of the puerperal state were sufficient to cause it to manifest itself in the form of insanity; the puerperal state opened the door and thus the psychosis was, as described by Kraepelin, liberated (*ausgelöst*). Insanity is said to occur once in 460 deliveries. In asylums for the insane from 7 to 9 per cent. of all the female admissions are cases of puerperal insanity. The insanities of pregnancy and of lactation claim each about one-half of the number of victims of puerperal insanity. Dr. Jelly finds a history of insanity, epilepsy, or cerebral disease in one-third of all his cases. Alcoholism also plays an important part, whether it is present as a hereditary taint or as a personally acquired vice. Some patients are liable during the pains and suffering of childbirth to suffer from suddenly-developed delirious troubles, but these rapidly pass away when delivery has taken place. In such cases a predisposition to epilepsy or profound hysteria often exists in the background (Kraepelin). Illegitimacy is a predisposing cause of puerperal insanity, the latter being twice as common after illegitimate as compared with legitimate births. Cases of puerperal insanity of septic origin have shown a tendency to decline in the last three decades owing to the stricter and wider adoption of antiseptic principles. Thus in the Philadelphia Maternity Hospital 99 cases of puerperal insanity of septic origin were admitted from 1867 to 1877, while from 1887 to 1897 the numbers had fallen to 20, "the latter period being marked by the introduction of stricter antiseptic measures in obstetric practice in Philadelphia." In Boston there has been a decrease in the ratio of puerperal to total labour cases, it being 6·4 per cent. in 1872 to 1880, 4·6 per cent. in 1880 to 1890, and 3·7 per cent. in 1890 to 1900. The more acute septic cases are of short duration and end in death. Others improve after removal of the sources of sepsis, but complete recovery occurs in only a few. The average duration of puerperal insanity is eight months. In some cases where there is marked cerebral exhaustion the patients live only a few days and where recovery takes place the process is slower than in septic cases. Of Dr. Jelly's 200 cases of puerperal insanity 30 had had more than one attack. "One woman was admitted to a hospital for the insane in 1870 with her first attack and in 1899 in her seventeenth attack." In 20 patients some form of mental defect or disorder had existed before pregnancy, thus, one had general paralysis, three epilepsy, three imbecility, three dementia præcox, five delusional insanity, and five secondary dementia. The prognosis as to recovery from a first attack was good (from 75 to 80 per cent.), but the tendency to recurrence was strong and the prognosis was bad after a second or third attack. Treatment consisted in keeping the bowels open, daily catheterisation of the bladder, rest with abundant good food, alcohol and hypnotics in moderate amount so as to secure sleep, and careful guarding against suicide. Home treatment was seldom satisfactory.

SOOT AND TERRESTRIAL AND COSMIC DUST.

IF complexity of composition frees a substance from reproach at all that substance should be soot, for recent micro-spectroscopic analyses have shown that it contains an extraordinary number of metallic elements. Thus chimney soot was found to contain, besides iron and calcium, nickel, manganese, copper, and silver. The soot from laundries seems to contain more elements than that from the kitchen or bedroom chimney, doubtless on account of the more complete combustion of the fuel in the laundry fire. Flue dust, besides containing the more or less common metals such as lead, silver, and copper, contains also nickel and manganese and even rubidium, gallium, indium, and thallium. Gallium appears to occur in all kinds of dusts and soots. Some dusts are clearly of terrestrial origin while others are undoubtedly of cosmic origin. Nickel occurs both in the dust from the clouds (or the dirt in the rain) and in soot, so that its presence in the former is not necessarily an indication of its cosmic origin. The dust which fell upon the earth in November, 1897, yielded a deposit identical with meteoric dust and was magnetic. The dust examined fell on a perfectly calm fine night and there was no rain for upwards of 24 hours. Its composition was totally unlike that of volcanic dust and flue dust from various industrial processes. It was therefore of meteoric origin. It has not hitherto been suggested that when London was in the throes of one of its darkest fogs it was bathed in an atmosphere of rich and rare metallic elements. But such would seem to be the case according to micro-spectroscopic methods. It should be remembered, however, that these methods discover the most infinitesimal quantities; indeed, it may be but a few molecules.

THE spring meeting of the Medico-Psychological Association will be held at the Essex County Asylum at Brentwood on Wednesday, April 24th. From 11.30 A.M. to 1 P.M. there will be an inspection of the asylum and grounds, followed by luncheon on the invitation of Dr. G. Amsden, the medical superintendent of the asylum. At the general meeting, which will take place at 2.45 P.M., Dr. Robert Jones will communicate a paper on "How should the subject of Insanity be taught to the Medical Student?" and Dr. Arthur H. Spicer will deal with "A Case of Spontaneous Fracture." In the evening the members will dine at the Café Monico, Piccadilly-circus.

THE death is announced, on April 13th, of Mr. George Fleming, C.B., LL.D., F.R.C.V.S., late Principal Veterinary

Surgeon to the army. He was born in 1833, served through the Crimea and on the North China Expedition, and was five times President of the Royal Veterinary College. A pathetic circumstance connected with his death is that he died suddenly on the second day after the wedding of his only surviving daughter to Mr. N. S. Manning, F.R.C.S. Irel., of Combe Martin.

THE KING has graciously consented to act as patron of the Prince of Wales's Hospital Fund for London, and His Royal Highness the Duke of Cornwall and York has expressed his pleasure in accepting the office of President in the place of His Majesty the King. His Majesty has intimated that in his capacity as patron he will continue to watch over the work of the Fund with the same deep interes as hitherto.

THE KING, who as Prince of Wales has been President of the Society of Arts since 1863, has now graciously acceded to the request of the society and has consented to become its patron. His Majesty has also permitted the society to continue the use of his profile on the medals of the society.

THERE was a small gathering of the members of the Metropolitan Counties Branch of the British Medical Association at Exeter Hall on April 3rd, when the meeting approved of the principles embodied in the provisional report of the Constitutional Committee.

THE King has been graciously pleased to grant his patronage to the Royal General Dispensary, Bartholomew's-close, E.C. His Majesty has also consented to continue his patronage to the Hospital for Consumption and Diseases of the Chest, Brompton.

THE second annual meeting of the American Congress of Tuberculosis will be held at the Grand Central Palace, New York, on May 15th and 16th, in joint session with the Medico-Legal Society of New York.

NOTICE has been received at the Colonial Office, dated April 10th, 1901, that 10 days' quarantine have been imposed at Cyprus against Egypt in consequence of bubonic plague.

THE King has appointed Dr. William Thomas Prout (Colonial Surgeon) to be an Official Member of the Legislative Council of the Colony of Sierra Leone.

DR. H. D. ROLLESTON is starting for Pretoria to replace Dr. J. W. Washbourn for six months as senior physician to the Imperial Yeomanry Hospital.

WORKHOUSE DIETARY.—A man who has been an inmate of Withington Workhouse since August, 1899, has made a practical protest against the new dietary order of the Local Government Board by throwing his breakfast through the doorway and refusing to do any work. He said that it was on account of his health and the insufficiency of the food. On the day of his protest it consisted of one and a half pints of porridge, one and a half ounces of treacle, and two ounces of bread. In addition to the breakfast the paupers, it was explained, if well behaved, had a lunch of bread and cheese. The medical officer of the workhouse said that the man was quite fit to go on the new diet and to do the work allotted to him. Some conversation took place at the county police-court, and the prisoner informed Mr. Yates, the magistrate, that "they give you eight ounces of bread in prison" and that the porridge is very thin and really gruel and "not much good." The medical officer said that "the prisoner seemed to have been put forward as a test case against the new diet." In sentencing the man to seven days' imprisonment with hard labour Mr. Yates said "he would now be able to compare the two diets."

THE REPORT ON ANÆSTHETICS ISSUED BY THE BRITISH MEDICAL ASSOCIATION AND "THE LANCET" CLINICAL REPORT ON ANÆSTHETICS.

II.[1]

THE sections in the report of the British Medical Association dealing with the methods employed, although of interest, afford no finality in the conclusions which they express. It is pointed out both in this report and in that of THE LANCET that the methods classified under one name may be widely different in their actual technique. A towel or piece of lint employed as a means of exhibiting chloroform may in dexterous hands be tolerably safe, but when used in such a way as to allow a high percentage vapour of chloroform with excessive exclusion of air it must result in death. The material upon which the committee of the British Medical Association had to work appears to have been too inexact for them to obtain any very definite results, but some useful information is still to be gleaned from the sections. Thus, although they state that the lint method gives a high danger-rate, higher than the towel method, yet the study of the cases compels the belief that practically all the recorded cases of chloroform administration were those grouped under the general heading of "open method," and that as there were so few figures dealing with any method based upon measured quantities of the anæsthetic used no basis for comparison is afforded. If this contention is correct the figures (pp. 95–96) are really merely those of various methods, perhaps some superior to others, still all of them examples of non-regulated chloroformisation. These plans were adopted by a large number of persons some of whom were experts, so that it appears probable that the results obtained constituted a resultant of opposite forces—the careful and the careless chloroformisation.

The two reports emphasise how persistent are the old methods—the "slapdash" methods, as they have been termed. The actual variety of the "open method" employed is thus shown to be of less importance than the individual skill of the person carrying it out. Certain it is, that we possess no statistics which prove the safety or the converse of the "open method," or of the method in which a regulating inhaler is employed. The appendix to the British Medical Association report gives a small number of cases (1521) in which a semi-closed method (the Hyderabad cone) was followed with a death-rate of *nil* and a low danger-rate, but here obviously the surgeon in charge took the utmost care to avoid an overdose. Moreover the plan adopted was to pour measured quantities of the chloroform into the cone at stated intervals, thus giving a certain degree of regulation of dosage by this method. These cases are too few for comparison with the towel, lint, or Skinner mask cases. All methods used for the exhibition of chloroform taken together according to the British Medical Association report, give a complication-rate of 3·27 per cent. to the total number of cases, a danger-rate of 1·032 per cent., and one death in 744 cases; the towel method gives a complication-rate of 3·92 per cent., a danger-rate of 1·41 per cent., and one death in 888 cases, and the lint method gives a complication-rate of 2·14 per cent., a danger-rate of 0·59 per cent., but one death in 542 cases, showing that although the cases of danger were few they were extremely grave when they did occur. The regulating method suggested by Dr. Junker and sometimes recorded under other names was only recorded in 411 instances, but although these showed a favourable record it would be useless to base any arguments upon so slender a foundation. Indeed, the experience of the past years has shown the tendency there is for an observer after the careful use of one method subsequently to regard his success as necessarily a proof of the value and safety of his plan. The good results are usually due less to such a cause than to the expertness acquired by conscientious employment of a routine method.

It would not only be tedious, but quite useless, to consider methods in the case of other anæsthetics than chloroform. We may, however, remark that the committee call attention, and we think rightly, to the fact that when mixtures

[1] Article I. was published in THE LANCET of March 30th, 1901, p. 961.

containing chloroform—e.g., the A.C.E. mixture—are exhibited from closed inhalers the danger-rate is at once greatly increased.

Germane to the question of method is that of the quantity of the anæsthetic employed. There are two considerations which must be borne in mind in attempting to arrive at any conclusions about what bearing a rapid or a slow rate of evaporation of an anæsthetic may have upon the safety or danger of the method employed. These are (1) whether we are dealing with a uniform evaporation-rate (we believe this is not so in the section, p. 95) and (2) whether a rapid evaporation was associated with a high air dilution. Obviously, until we know that the air dilution is constant or that it varies according to a known rate and that the evaporation is so uniform that we can be sure that the cases of danger were not those in which a high evaporation-rate existed throughout, we cannot learn very much from even the most elaborate tables or collocation of figures. Let us take an example to make this point clear. If a chloroformist adopts a very slow rate of evaporation, the time of induction being prolonged, a great temptation is offered to accelerate the induction of narcosis by rapidly increasing the quantity of the anæsthetic given. In such a case the danger or death would appear in the report before us in association with an apparently small quantity of chloroform distributed over the prolonged induction. As must have been expected the mere rate at which chloroform is inhaled appeared to be a matter of no importance, the vital question being how much air was present to dilute its vapour.

The duration of anæsthesia was also studied and the following deductions from the statistics are certainly of interest, even although it would be unwise to attach too much importance to them since they are unfortunately divorced from such contributory factors as methods of administration, age, and general condition of the patient, the temperature of the room, and, perhaps the most important of all, the character and severity of the operation. The methods, indeed, adopted in the British Medical Association's report, possibly incident to the peculiar circumstances of its conduct, tend to over-specialisation in the sense that many intimate factors are separated and this leads to a serious loss of continuity. Thus besides the instances given above, we meet with "phenomena of anæsthesia" and "after-effects" wholly separated from "general conditions," "nature of operation," "duration of administration," "quantity of anæsthetic used," and method of induction.

Dealing with chloroform, we find that prolonged duration (*vide* p. 85) was marked by a high rate of complication, including many trivial complications such as were included in Class *a*, while the danger-rate was higher in the initial stages of anæsthesia and became markedly less in very prolonged cases—e.g., those exceeding an hour; 75 per cent. of the deaths occurred before the average duration of chloroform narcosis was reached (i.e., 22·748 minutes). However fatalities possibly with causal relationship to prolonged anæsthesia are recorded in relation to three cases which lasted 40, 45, and 90 minutes, these being the longest anæsthesia noted. The cases of "danger" which, however, did not lead to death were distributed pretty evenly throughout the period of anæsthesia, being apparently as liable to occur in short, in medium, and in prolonged operations under anæsthetics. These two facts are of great importance as they appear to show that on the one hand the dangers attributed to incomplete anæsthesia, and on the other those arising from operation effects incident to prolonged anæsthesia, did not exist at all events in sufficient number to influence the statistics. The effects incident to incomplete anæsthesia would appear in the early stage and those due to operative shock and exhaustion in the later stage of narcosis, but, as we have said, no clear indication of such is found in the figures before us. When all anæsthetics are taken together the highest danger-rate existed in cases lasting over two hours (2·12 per cent. to the total number of cases), the next highest in those lasting less than five minutes (1·58 per cent.) and then in those lasting between five and 10 minutes (1·0 per cent.). Under chloroform alone the danger-rate was also highest in narcosis lasting less than five minutes (2·02 per cent.); for those lasting from five to 10 minutes it was 1·42 and a slight but not uniform rise followed. The incidence of danger in the early stage of narcosis under chloroform, ether, gas and ether, and the A.C.E. mixture seems to indicate either that the stage of induction is the period of greatest peril or that the tendency is to rush the patient into unconsciousness without due regard to consequences. It may be added that as the "after-effects" phenomena and "imperfect anæsthesia" cannot but be regarded as closely allied to the question of duration of anæsthesia and "quantity of anæsthetic" used, we propose to consider the sections (pp. 106 and 122) in the present connexion.

In Table LXXII. an attempt is made to associate the after-effects with the duration of anæsthesia, but only retching and various degrees of sickness, collapse, headache, excitement are given. That such phenomena should, *cæteris paribus*, occur in prolonged anæsthesia seems to need no comment. Considering the chief after-effects *seriatim* the following facts are stated (p. 108) in the report. While slight (i.e., post-anæsthetic) vomiting occurred in the following order as to frequency after (1) ether, (2) A.C.E., (3) gas and ether, and (4) chloroform, prolonged (severe) vomiting occurred in the following order: (1) chloroform, (2) gas and ether, (3) A.C.E., and (4) ether. In the last case the complication was rare. Circulatory depression occurred most frequently after chloroform, less after ether, and still less after gas and ether, and this in spite of the fact that there is evidence that in many cases ether was selected because circulatory depression was feared. Bronchitis, or bronchial catarrh, is noted as occurring once in every 400 ether administrations, and only once in every 3300 chloroform cases. These cases were grouped as "anxiety," while no instances occur under "danger" or "death." In the 13 cases given two were severe bronchitis, but of short duration, the other 11 being apparently mild and probably merely catarrh of a very transitory character. One case of broncho-pneumonia only was recorded which occurred after A.C.E. in succession to ether and commenced on the fifth day after the inhalation. Corroborative evidence of the extreme rarity of fatal lung complications following the use of ether is given in THE LANCET report, pp. 167 to 173. Of the 37 cases of which necropsies are given only two give evidence of possibly acute lung trouble which may have been related causally with the inhalation of ether. These were a case of "ether pneumonia" and one of pulmonary œdema. On referring to the actual cases we find that three deaths are described as resulting from heart failure due to respiratory embarrassment from emphysema, while in a fourth these conditions were intensified by the presence of bronchitis. It is to be noted, however, that all these conditions were chronic and although the improper use of ether made them dangerous yet they were not the result of ether inhalation. In another case (see Case 1) ether was given to a person suffering from bronchitis and this procedure, most improper in itself, led to an exacerbation of the patient's disease. After noticing the intensification of the symptoms of such complaints as pneumonia, bronchorrhœa, and empyema, the report concludes by saying: "It is noteworthy that comparatively little mention is made of patients dying from pulmonary affections initiated by the ether." And this statement becomes more emphatic when we remember that THE LANCET report covers a period of years from the first use of ether to 1891 and includes a long period during which the methods by which ether was given were not only crude but even dangerous.

Renal after-effects are conspicuously absent as a direct result of ether inhalation. In the British Medical Association report two cases of uræmia are noted, but in neither can the effects of the operation be eliminated. THE LANCET report makes the statement: "In no cases are reliable facts given pointing to nephritic trouble *following* the use of ether." These facts are very striking, perhaps the more so as the first report referred to has shown little tendency to favour ether, at all events in the body of the text.

Both reports again refer in some detail to the question of the relative importance of respiratory and circulatory failure under chloroform, and again they concur in asserting that while the former frequently occurs, yet in the "danger" and "death" cases the latter phenomenon is the one of first importance. Personally, we believe that as our knowledge of the physiology of the subject increases we shall attach much less importance to the point, but at present it seems pretty certain that the weight of evidence tends to show that more patients die from chloroform through circulatory depression, apparently arising from cardiac enfeeblement or vaso-motor paresis or both.

It is with a feeling of regret that we refer to the sections in the report which consider the all-important question of resuscitation. Here we are met by a unanimous verdict of *non possumus*. It is idle beating of the air. We are inclined

to wish that some attempt had been made in the report of the British Medical Association, upon the committee of which sat men of great experience, to point out how futile and wasteful of valuable time are most of the measures recorded as having been used in attempting resuscitation. Surely with the knowledge gathered from a review of minor and major complications arising in 26,000 cases some definite directions might have been advanced to help those who in desperate plight strive often without method or system to restore to animation patients over-narcotised or asphyxiated.

The "conclusions" of the British Medical Association report are perhaps the weakest portion of that pronouncement. They exaggerate the timidity of utterance which it appears to us shows itself throughout the whole. In those which are truly conclusions, that is, direct inferences from premisses given before and not merely repetitions of statements of fact, we notice an apparent "hedging," which certainly lessens the value of the report as a guide to practical men. Thus, on p. 124 we read: "Although (excluding nitrous oxide) ether may be accepted as the safest routine agent, certain circumstances, determined by the state of the patient, the nature of the operation, &c., may render the use of some other anæsthetic or combination of anæsthetics both safer and easier." If such a statement means anything at all it amounts to this, that the writers were quite unable or unwilling to give a definite opinion as to the anæsthetic which should be given without adding so many vague generalities as to leave their decision colourless and devoid of merit. The conclusions of THE LANCET report are definite and are borne out by the facts given in the body of that report.

In the general conclusion of the British Medical Association report, although we find some firmness of affirmation, we venture to think that it is diametrically opposed to the findings of the preceding sections of the report. It states in two forms the same thing, that the one thing needful is the experience of the anæsthetist—all other things pale into nebulous nothings beside his overpowering personality. But although we endorse the statement that no one who has not experience or who has not learnt the principles of his art should be entrusted with the care of a patient, yet we fail to see what useful purpose such an elaborate report as that before us can subserve if its 134 pages cannot tell us more than this statement of platitude presents. Surely the experience of even the expert needs supplementing by the views of others and by the study of reports such as those before us, to be broadened by definite statements which may reasonably be looked for from such reports. Unquestionably the main value of the report of the British Medical Association lies in the many sidelights which it perhaps unwittingly throws upon the subject. Its dealings with the phenomena of narcosis and the after-effects, the "complications," many of which appear to the ordinary person almost too trivial to chronicle, are very useful sometimes as guides as to what to do and sometimes as beacons warning against what to avoid. The cases of death, all of which are epitomised, are too few for special comment, and this section is of far less importance to the student than the corresponding portion of THE LANCET report which gives the particulars of practically all fatalities which occurred in a period of over 40 years. No reference in the body of the report of the British Medical Association is made to the appendices, nor are these of special moment. That of Professor Ramsay is somewhat belated, as he had given his views some years back in a leading lay magazine, and although his *dicta* concerning the purification of chloroform by slaked lime have been adversely criticised by experts in chloroform-making, we notice that he has not availed himself of the present opportunity for reconciling his statements with those of his critics. Lieutenant-Colonel Lawrie's appendix is very interesting. It explains his methods and describes his practice, which has become so far modified that he now uses measured quantities of chloroform. The report of the British Medical Association brings into bold relief the leisure, order, and numerical strength of the anæsthetic staff which under Lieutenant-Colonel Lawrie controls the proceedings of the Afzulgunj Hospital.

Messrs. Baillière, Tindall, and Cox, medical publishers, in consequence of their premises being required for the enlargement of Charing Cross Hospital, have removed to 8, Henrietta-street, Strand.

THE CASE OF MR. LOUIS FERDINAND DODS: AN APPEAL.

WE have been requested to announce that the undersigned gentlemen have formed themselves into a committee for the purpose of assisting Mr. Louis Ferdinand Dods in defraying the heavy law costs and expenses which he has been unfortunately put to (amounting to over £400) in defending the action brought against him by Nurse Dowling for an alleged libel in respect of a notice which he gave to a relieving officer in accordance, as he believed, with the Lunacy Acts.

The appeal of the signatories runs as follows:—

"In the first instance upon the action being tried by Mr. Justice Darling and a jury a verdict was given against Mr. Dods for £100, but happily for the general public and the profession the Court of Appeal put the matter right and reversed the verdict and judgment of the court below and directed judgment to be entered for the appellant with costs, which, however, he has not been able to recover. Looking at all the circumstances, and considering that Mr. Dods has for many months had the severe strain and burden of a litigation which he has concluded so successfully, as much for the benefit of his colleagues in the profession as for himself, the committee earnestly appeal to the medical profession generally, and to all others who may be disposed to be generous, to contribute to the fund."

Mr. W. J. Walsham has consented to act as honorary treasurer and contributions may be sent to him or to any other member of the committee as follows:—

LAUDER BRUNTON, M.D. Edin., F.R.S., 10, Stratford-place, W.
GEORGE DANFORD THOMAS, M.D. Brux., 20, Brunswick-square, W.C.
ALBAN DORAN, F.R.C.S. Eng., 9, Granville-place, W.
PERCY G. LODGE, L.S.A. Lee House, Bradford.
WILLIAM RAYNER, M.R.C.S. Eng., 4, Dorset-square, N.W.
W. J. WALSHAM, F.R.C.S. Eng., 77, Harley-street, W.
RIVERS WILLSON, Union Society, Oxford.

FIRST LIST OF CONTRIBUTORS.

	£	s.	d.		£	s.	d.
Sir T. Lauder Brunton...	5	5	0	Mr. Percy G. Lodge ...	2	2	0
Dr. George Danford Thomas	5	5	0	Mr. William Rayner ...	5	5	0
				Mr. Percy A. Storey ...	5	5	0
Mr. Alban H. Griffiths Doran	2	2	0	Mr. W. J. Walsham ...	5	5	0
				Mr. Rivers Willson ...	1	1	0

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on April 13th, the President, Sir WILLIAM MACCORMAC, Bart., K.C.V.O., being in the chair.

Mr. Sibert Forrest Cowell was admitted to the office of secretary and he signed the required declaration.

A letter of March 20th was read from the Home Secretary conveying the thanks of the King for the address of the College expressing sympathy on the occasion of the death of Queen Victoria and congratulation on His Majesty's accession to the Throne.

The Museum Committee reported that a number of Chinese and other skeletons and skulls had been purchased for the museum.

The best thanks of the Council were given to Mr. Bryant for his present to the College of books and pamphlets.

The question of providing additional accommodation for the library was referred to the Library Committee.

The Council, on the recommendation of the committee, did not award the triennial prize. The Jacksonian Prize was awarded to Mr. W. McAdam Eccles, the author of the essay on the Pathology, Diagnosis, and Treatment of the Diseases caused by and connected with Imperfect Descent of the Testicle, with the motto "*Crux mihi grata quies.*"

The subject for the next collegial triennial prize was chosen—"The Pathological Conditions arising from Imperfect Closure of the Visceral Clefts."

The subject for the next Jacksonian Prize for the year 1902 was chosen—"Fracture of the Skull: its Consequences, Immediate and Remote, including Pathology and Treatment."

In future it will be required that all essays for the collegial triennial and Jacksonian prizes shall be typewritten.

On the recommendation of the Walker Prize Committee it was resolved not to award the prize on this occasion. The opinion of the committee was arrived at after consulting, and receiving most valuable advice and assistance from, eminent French, Italian, German, Scandinavian, American, Canadian, and British surgeons and pathologists.

The following two Members of the College of 20 years' standing were elected to the Fellowship: Mr. Priestley Smith of Birmingham and Major Ronald Ross, I.M.S., of Liverpool.

A report from the Board of Examiners in Dental Surgery was received, but it was referred back to the board for further consideration in connexion with other matters.

Dr. T. G. Brodie was re-elected Superintendent of the Laboratories subject to the approval of the Royal College of Physicians of London.

It was resolved to ask the Royal College of Physicians of London to appoint delegates to meet delegates of this College for the purpose of considering the position of the two colleges with regard to the reconstituted University of London.

In reply to a letter from the secretary of the Congress on Tuberculosis requesting the loan of specimens from the museum it was referred to the chairman of the Museum Committee and the Conservator of the Museum to select the specimens to be lent.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6177 births and 4339 deaths were registered during the week ending April 13th. The annual rate of mortality in these towns, which had been 18·4, 19·7, and 19·2 per 1000 in the three preceding weeks, was again 19·2 last week. In London the death-rate was 18·3 per 1000, while it averaged 19·8 in the 32 large provincial towns. The lowest death-rates in these towns were 11·2 in Croydon, 11·6 in Cardiff, 12·3 in West Ham, and 15·7 in Birkenhead; the highest rates were 23·7 in Newcastle, 23·9 in Preston, 24·2 in Manchester, and 25·0 in Liverpool. The 4339 deaths in these towns included 397 which were referred to the principal zymotic diseases, against 427 and 380 in the two preceding weeks; of these, 130 resulted from whooping-cough, 112 from measles, 68 from diphtheria, 35 from diarrhœal diseases, 31 from scarlet fever, 19 from "fever," and two from small-pox No death from any of these diseases occurred last week either in Plymouth or in Huddersfield; in the other towns they caused the lowest death-rates in Croydon, Brighton, Norwich, and Blackburn, and the highest rates in Portsmouth, Bristol, Wolverhampton, Liverpool, and Burnley. The greatest proportional mortality from measles was registered in Portsmouth, Liverpool, Leeds, Hull, Sunderland, and Gateshead; from scarlet fever in Derby; and from whooping-cough in Bristol, Swansea, and Wolverhampton. The mortality from "fever" showed no marked excess in any of the large towns. The 68 deaths from diphtheria included 26 in London, five in Bristol, five in Leicester, four in Birmingham, and four in Manchester. Two fatal cases of small-pox were registered last week in Liverpool, but not one in any other of the 33 large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums hospitals on Saturday, April 13th, The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1601, against 1568 and 1572 on the two preceding Saturdays; 205 new cases were admitted during the week, against 151, 167, and 180 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 363 and 360 in the two preceding weeks, further declined last week to 345, and were 45 below the corrected average. The causes of 66, or 1·5 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Salford, Bradford, Leeds, Hull, and 10 other smaller towns; the largest proportions of uncertified deaths were registered in Norwich, Liverpool, Blackburn, Preston, Sheffield, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·1, 21·6, and 24·1 per 1000 in the three preceding weeks, declined again to 23·2 during the week ending April 13th, but showed an excess of 4·0 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 16·8 in Perth and 18·9 in Leith and in Paisley to 23·9 in Edinburgh and 24·1 in Glasgow. The 726 deaths in these towns included 51 from whooping-cough, 17 from measles, 13 from diarrhœa, six from small-pox, four from diphtheria, three from scarlet fever, and one from "fever." In all, 95 deaths resulted from these principal zymotic diseases, against 87, 93, and 102 in the three preceding weeks. These 95 deaths were equal to an annual rate of 3·0 per 1000, which was 1·2 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had been 36 and 57 in the two preceding weeks, declined again last week to 51, of which 27 occurred in Glasgow, 10 in Edinburgh, six in Dundee, and four in Paisley. The deaths from measles, which had been 17 and 16 in the two preceding weeks, rose again to 17 last week, and included 10 in Edinburgh, three in Glasgow, and two in Leith. The fatal cases of diarrhœa, which had been 16 and 8 in the two preceding weeks, rose again last week to 13, of which six were registered in Glasgow, four in Aberdeen, and two in Dundee. The deaths from small-pox, which had been 24, 11, 10, and five in the four preceding weeks, rose again to six last week, and all occurred in Glasgow, where the four fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 126, 127, and 150 in the three preceding weeks, further increased last week to 155, and showed an excess of 21 over the number in the corresponding period of last year. The causes of 32, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 36·6, 34·0, and 31·9 per 1000 in the three preceding weeks, rose again to 35·6 per 1000 during the week ending April 13th. During the past four weeks the death-rate in the city has averaged 34·5 per 1000, the rates during the same period being 18·0 in London and 22·4 in Edinburgh. The 236 deaths of persons belonging to Dublin registered during the week under notice were 24 in excess of the number in the preceding week, and included 15 which were referred to the principal zymotic diseases, against 14 and 12 in the two preceding weeks; of these, eight resulted from whooping cough, three from diarrhœa, 2 from scarlet fever, and two from "fever." These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rates during the same period being 1·9 in London and 3·9 in Edinburgh. The fatal cases of whooping-cough, which had been seven, 11, and five in the three preceding weeks, rose again last week to eight. The mortality from diarrhœa showed a slight increase over that recorded in the preceding week. The fatal cases of "fever," which had been two, one, and four in the three preceding weeks, declined again to two last week. The 236 deaths in Dublin last week included 37 of children under one year of age and 59 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Six inquest cases and four deaths from violence were registered; and 79, or one-third, of the deaths occurred in public institutions. The causes of 15, or more than 6 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MARCH, 1901.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the 29 cities and boroughs in the county of London. With

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1901.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1901.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœal diseases.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,651,113	1	708	730	1	146	2	11	249	—	1848	5·2	—	166	30	83	198	—	27	1	62	567	1·6	6358	17·8	130
West Districts.																										
Paddington	148,148	—	33	12	—	6	—	1	13	—	65	5·7	—	—	1	2	11	—	1	—	2	17	1·5	186	16·4	135
Kensington	177,205	—	24	20	—	5	—	1	6	—	56	4·1	—	—	2	4	16	—	1	—	1	24	1·8	208	15·2	194
Hammersmith	111,213	—	13	16	—	6	1	—	8	—	44	5·2	—	—	1	4	12	—	—	—	1	18	2·1	140	16·4	141
Fulham	141,920	1	31	31	—	4	—	—	10	—	77	7·1	—	5	3	2	6	—	2	—	2	20	1·8	171	15·7	110
Chelsea	73,843	—	12	9	—	2	—	—	7	—	30	5·3	—	1	—	1	9	—	—	—	—	11	1·9	109	19·2	147
City of Westminster	189,375	—	24	16	—	7	—	—	9	—	56	3·9	—	—	1	1	3	—	1	—	4	10	0·7	239	16·5	167
North Districts.																										
St. Marylebone	140,460	—	16	28	—	5	—	—	11	—	60	5·6	—	—	—	3	9	—	—	—	4	16	1·5	191	17·7	144
Hampstead	82,605	—	12	8	—	1	—	—	2	—	23	3·6	—	—	1	2	2	—	—	—	—	5	0·8	78	12·3	83
St. Pancras	246,098	—	30	38	—	6	—	1	13	—	88	4·7	—	—	1	7	12	—	3	—	3	26	1·4	355	18·8	141
Islington	353,528	—	46	33	—	15	—	—	18	—	112	4·1	—	3	—	2	10	—	3	—	4	22	0·8	420	15·5	140
Stoke Newington	55,758	—	7	10	—	2	—	1	—	—	20	4·7	—	1	—	1	1	—	—	—	1	4	0·9	59	13·8	105
Hackney	228,417	—	25	37	—	9	—	1	17	—	89	5·1	—	29	—	3	6	—	1	—	3	42	2·4	306	17·5	104
Central Districts.																										
Holborn	59,700	—	7	5	—	1	—	—	5	—	18	3·9	—	1	—	—	2	—	1	—	1	5	1·1	89	19·4	88
Finsbury	106,590	—	10	12	—	5	—	—	9	—	36	4·4	—	1	1	1	5	—	1	—	2	11	1·3	168	20·5	101
City of London	25,289	—	3	3	—	—	—	—	2	—	8	4·3	—	1	—	—	1	—	—	—	—	2	1·1	39	20·9	188
East Districts.																										
Shoreditch	120,614	—	8	15	—	7	—	3	9	—	42	4·5	—	2	—	1	11	—	—	—	1	15	1·6	207	22·4	147
Bethnal Green	127,509	—	14	17	—	2	—	—	7	—	40	4·1	—	4	1	6	2	—	2	—	1	16	1·6	192	19·6	115
Stepney	305,058	—	34	41	—	9	—	—	23	—	107	4·6	—	13	3	6	6	—	3	—	2	33	1·4	501	21·4	123
Poplar	170,465	—	44	59	—	11	—	—	6	—	120	9·2	—	4	—	6	11	—	3	—	3	27	2·1	265	20·3	141
South Districts.																										
Southwark	208,869	—	53	37	—	3	—	—	4	—	97	6·1	—	14	3	1	9	—	1	—	4	32	2·0	351	21·9	137
Bermondsey	136,824	—	28	21	1	8	—	—	11	—	69	6·6	—	13	1	1	3	—	1	—	2	21	2·0	230	21·9	147
Lambeth	318,530	—	42	45	—	4	1	—	14	—	106	4·3	—	9	3	6	14	—	1	1	6	40	1·6	411	16·8	112
Battersea	180,017	—	20	18	—	3	—	—	5	—	46	3·3	—	2	1	1	8	—	1	—	3	16	1·2	218	15·8	130
Wandsworth	242,224	—	26	30	—	9	—	—	7	—	72	3·9	—	6	2	3	8	—	—	—	3	22	1·2	254	13·7	122
Camberwell	269,102	—	52	34	—	6	—	1	13	—	156	7·6	—	32	2	14	7	—	—	—	2	57	2·8	417	20·2	150
Dept'ford	113,562	—	32	22	—	1	—	1	7	—	63	7·2	—	9	1	2	10	—	—	—	—	22	2·5	165	18·9	158
Greenwich	91,228	—	16	17	—	—	—	—	7	—	40	5·7	—	6	1	2	—	—	—	—	1	10	1·4	120	17·1	90
Lewisham	112,856	—	32	22	—	4	—	—	3	—	67	7·7	—	8	—	—	1	—	—	—	4	13	1·5	129	14·9	125
Woolwich...	114,106	—	14	18	—	5	—	1	3	—	41	4·7	—	2	1	1	3	—	1	—	2	10	1·1	140	16·0	104
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 19 cases of membranous croup.

† Including deaths from membranous croup.

regard to the notified cases of infectious disease it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 5·2 per 1000 of the population, estimated at 4,651,113 persons in the middle of the year. In the three preceding months the rates had been 8·0, 6·2, and 5·7 per 1000 respectively. The rates were considerably below the average in the City of Westminster and in Hampstead, Holborn, Battersea, and Wandsworth boroughs; while they showed the largest excess in Fulham, Poplar, Bermondsey, Camberwell, Deptford, and Lewisham. One case of small-pox was notified last month in Fulham, but not one in any other metropolitan borough; and no small-pox patients were under treatment in any of the Metropolitan Asylums hospitals at the end of March. Scarlet fever was slightly less prevalent during March than in the preceding month; among the various metropolitan boroughs this disease showed the highest proportional prevalence in Paddington, Fulham, Poplar, Southwark, Deptford, and Lewisham. The Metropolitan Asylums hospitals contained 1533 scarlet fever patients on March 30th, against 2460, 1979, and 1791 at the end of the three preceding months; the weekly admissions averaged 142, against 214, 164, and 156 in the three preceding months. The prevalence of diphtheria during March has shown no variation from that recorded in each of the two preceding months; the greatest proportional prevalence of this disease occurred in Fulham, St. Marylebone, Poplar, Camberwell, Deptford, and Lewisham. There were 1084 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1343, 1113, and 1111 at the end of the three preceding months; the weekly admissions averaged 134, against 127, 129, and 136 in the three preceding months. The prevalence of enteric fever last month showed a further decline from that recorded in recent months; among the various metropolitan boroughs this disease was proportionally most prevalent in Hammersmith, Hackney, Finsbury, Shoreditch, Poplar, and Bermondsey. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 403, 299, and 224 at the end of the three preceding months, had further fallen to 162 at the end of March; the weekly admissions averaged 18, against 51, 32, and 25 in the three preceding months. Erysipelas was proportionally most prevalent in Paddington, Chelsea, Holborn, Finsbury, City of London, and Bermondsey. Of the 11 cases of puerperal fever three were notified in Shoreditch borough.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the various boroughs in which the patients had previously resided. During the four weeks ending March 30th the deaths of 6358 persons belonging to London were registered, equal to an annual rate of 17·8 per 1000, against 16·2, 17·5, and 19·4 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 12·3 in Hampstead, 13·7 in Wandsworth, 13·8 in Stoke Newington, 14·9 in Lewisham, 15·2 in Kensington, and 15·5 in Islington; the highest rates were 20·5 in Finsbury, 20·9 in the City of London, 21·4 in Stepney, 21·9 in Southwark and in Bermondsey, and 22·4 in Shoreditch. During the four weeks of March 567 deaths were referred to the principal zymotic diseases; of these, 166 resulted from measles, 30 from scarlet fever, 83 from diphtheria, 198 from whooping-cough, 27 from enteric fever, one from simple continued fever, and 62 from diarrhœal diseases. The lowest death-rates last month from these diseases occurred in the City of Westminster, in Hampstead, Islington, Stoke Newington, Holborn, in the City of London, and in Woolwich; and the highest rates in Hammersmith, Hackney, Poplar, Southwark, Bermondsey, Camberwell, and Deptford boroughs. The 166 deaths from measles showed a decline of 94 from the corrected average number; this disease was proportionally most fatal in Hackney, Southwark, Bermondsey, Camberwell, Deptford, and Lewisham. The 30 fatal cases of scarlet fever were 23 below the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs the greatest proportional mortality from this disease occurred in Kensington, Fulham, Stepney, Southwark, and Lambeth. The 83 deaths from diphtheria showed a decline of 80 from the corrected average number; this disease was proportionally most fatal in Hammersmith, St. Pancras, Bethnal Green, Poplar, and Camberwell. The 198 fatal cases of whooping-cough were 61 below the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease showed the greatest proportional fatality in Kensington, Hammersmith, Chelsea, Shoreditch, Poplar, and Deptford. The 28 deaths referred to "fever" were slightly below the corrected average number; the highest "fever" death-rates occurred in Fulham, St. Pancras, Islington, Holborn, Bethnal Green, Stepney, and Poplar. The 62 deaths from diarrhœal diseases showed a considerable excess over the number in the corresponding periods of the 10 preceding years; these diseases were proportionally most fatal in the City of Westminster, St. Marylebone, Finsbury, Southwark, Lambeth, and Lewisham. In conclusion, it may be stated that the aggregate mortality from these principal zymotic diseases in London during March was nearly 31 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to registered births, was equal to 130 per 1000. The lowest rates of infant mortality were recorded in Hampstead, Hackney, Holborn, Finsbury, Greenwich, and Woolwich; and the highest rates in Kensington, the City of Westminster, the City of London, Camberwell, and Deptford.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Deputy Inspector-General G. J. Irvine to Chatham Hospital. Staff Surgeons: F. A. Brice to the *Malabar*, for Bermuda Dockyard; G. A. Waters to the *Psyche*; and E. W. Lomas to the *Northampton*. Surgeons: P. H. Boyden to the *Woodlark* on recommissioning, and John Whelan to the *Howe*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel R. W. Ford is posted to the Station Hospital, Portsmouth, for duty. Lieutenant Henderson is placed under orders for India. Lieutenants A. J. Hull and R. D. Jameson join at Woolwich. Lieutenant-Colonel R. C. Gunning, Acting Principal Medical Officer, North-Western District, is placed under orders for South Africa.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Albert Ehrmann, 22nd Middlesex Volunteer Rifle Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 2nd Cinque Ports (Eastern Division, Royal Garrison Artillery): Christopher Ralph Skyrme to be Surgeon-Lieutenant. Renfrew and Dumbarton: Surgeon-Captain W. A. McLachlan resigns his commission. 2nd East Riding of Yorkshire (Western Division, Royal Garrison Artillery): Surgeon-Lieutenant-Colonel J. Sherburn resigns his commission, with permission to retain his rank and to wear the uniform of the corps on his retirement. *Rifle:* 1st Volunteer Battalion the Lincolnshire Regiment: Surgeon-Lieutenant-Colonel H. Wright resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement. 3rd Lanarkshire: Alexander Roxburgh to be Surgeon-Lieutenant. 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders): George Francis Whyte to be Surgeon-Lieutenant. 5th (West) Middlesex: Edwin Charles Montgomery-Smith to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Surgeon-Lieutenant G. A. Wright resigns his commission.

MENTIONED IN DESPATCHES.

Nigeria.

The names of Dr. F. Cargill and Dr. Thompson are specially mentioned in despatches (the latter for sucking poison from an arrow wound) to the Colonial Secretary relating to the punitive operations in Northern Nigeria.

South Africa.

The following extracts are from a despatch from Earl Roberts, K.G., to the Secretary of State for War, dated April 2nd, 1901:—

Royal Army Medical Corps.—Under Surgeon-General Wilson this department has laboured indefatigably both in the field and in the hospitals. Some cases have been brought to my notice in which officers have proved unequal to the exceptional strain thrown upon them by the sudden expansion of hospitals, and in the earlier stages of the war the necessity of more ample preparations to meet diseases were not quite fully apprehended. These cases have been fully reported on by the Royal Commission, and will no doubt receive the attention of His Majesty's Government. I am not, however, less conscious of the unremitting services of the great majority of the officers of the Royal Army Medical Corps. There are many instances, indeed, recorded of great gallantry having been displayed by the officers in carrying on their work of mercy under heavy fire, and in the face of exceptional difficulties their duty has been ably performed. My thanks are also due to the distinguished consulting surgeons who have come out to this country, and by their advice and experience materially aided the Royal Army Medical Corps. The services rendered by Sir William MacCormac, Mr. G. H. Makins, Mr. F. Treves, the late Sir W. Stokes, Mr. Watson Cheyne, Mr. G. Cheatle, Mr. Kendall Franks, Mr. John Chiene, and Sir Thomas Fitzgerald were of incalculable value. The abnormal demand upon the R.A.M.C. necessitated the employment of a large number of civil surgeons, and to these gentlemen the army owes a debt of gratitude. The heavy strain on the Army Medical Department was further much relieved by the patriotic efforts of the several committees and individuals who raised, equipped, and sent out complete hospitals. None but those on the spot can realise how much the Irish Hospital under Sir W. Thomson; the Yeomanry Hospitals and Bearer Co., under Mr. A. D. Fripp, M.V.O., M.B., M.S., Mr. A. R. J. Douglas, M.R.C.S., Mr. A. A. Scott-Skirving, M.R.C.S., Mr. T. H. Openshaw, F.R.C.S.; the Langman Hospital, under Mr. R. T. A. O'Callaghan, F.R.C.S.I.; the Welsh Hospital, under Professor T. Jones, M.B., F.R.C.S. (dead), Professor A. W. Hughes (dead); the Princess Christian's Hospital, under Mr. J. P. Bush, M.R.C.S.; the Edinburgh Hospital, under Mr. D. Wallace, M.B.; the Scottish National Hospital, under Mr. H. R. Clarke, M.R.C.S.; the Van Alen Hospital, under Mr. S. Osborn, F.R.C.S.; and the Portland Hospital, under Mr. A. Bowlby, F.R.C.S.—contributed to the comfort and well-being of the sick and wounded.

I might here mention the invaluable assistance rendered to the sick and wounded by those private persons, members of the British Red Cross Society, who, headed by Her Royal Highness Princess Christian, raised, organised, and equipped hospital trains. As a result of their patriotic exertions two complete trains were constructed, one being built at Birmingham and the other made up at East London. Eight other hospital trains were organised by the medical authorities in South Africa, and also rendered excellent service. It may give some idea of the work which was accomplished by these trains if I append a statement showing the distance they covered and the number of patients they carried:—

Cape Line Railway.

—	Journeys.	Miles.	Patients.
Second train	126	67,000	6,063
Third ,, ...	64	62,000	6,238
Fourth ,, ...	24	Unknown.	2,883
Fifth ,, ...	26	28,200	3,113
Sixth ,, ...	31	Unknown.	2,694
Seventh ,, ...	92	,,	6,296

Natal Line Railway.

—	Journeys.	Patients.
First train	145	12,148
Second ,, ...	166	12,789
Third ,, ...	9	732

Hospital Ships.

The army in South Africa owes a great deal to the hospital ships and to the staff of medical officers and nurses who attended the sick and wounded, transferred to them from the base hospitals.

The *Spartan*, *Trojan*, and the *Princess of Wales* were used to convey invalids to Cape Town from other colonial ports. The *Lismore Castle*, *Dunera*, *Orcana*, *Avoca*, *Nubia*, and *Simla* were originally hired transports and were fitted out at Durban and employed in establishing a fortnightly system of hospital ships for the conveyance of invalids to England.

The *Princess of Wales* and the *Maine* were fitted out and maintained by the splendid generosity of private individuals, the former by the Central British Red Cross Committee for H.R.H. the Princess of Wales and the latter by a committee of American ladies.

My grateful thanks, as well as those of the army in South Africa, are due to the individuals concerned, as well as to those owners of private yachts who placed them at the disposal of the sick and wounded officers and men

The following table will be of interest:—

Name of ship.	Where prepared.	By whom.	No. of voyages home with invalids up to end of December, 1900.	No. of invalids carried.
Spartan.	Southampton.	Union S.S. Co.	1	108
Trojan.	,,	,,	1	66
Princess of Wales.	Newcastle-on-Tyne.	Messrs. W. Armstrong, Whitworth and Co.	3	526
Maine.	Thames.	Atlantic Transport Company.	2	285
Lismore Castle.	Durban.	Admiralty Transport Department.	2	229
Avoca.	,,		4	1131
Dunera.	,,		2	539
Orcana.	,,		3	548
Nubia.	,,		2	543
Simla.	,,		3	816

My thanks are due to Khem Bahadur Dhanjibhoy, a Parsee gentleman long resident in the Punjab, who presented tongas for ambulance purposes. These tongas were horsed and fully equipped with drivers and all necessary gear. These proved most useful.

Nursing Sisters.

I find it difficult within the limits of a short paragraph to give expression to the deep feeling of gratitude with which the Nursing Sisterhood has inspired all ranks serving in South Africa. The devotion, skill, courage, and endurance displayed equally by the Army Nursing Service and by kindred organisations from the colonies have excited my admiration and fully justified the opinion I have held for years as to the necessity and economy to the service of an ample nursing service for our army. Some of the nurses who have been the most helpful have been lent to the Army Nursing Reserve by the great hospitals in the United Kingdom.

I propose in a later despatch to bring to your notice the names of some of the most deserving.

The names of the following officers are also brought to notice for meritorious services:—

ROYAL ARMY MEDICAL CORPS.

Colonel W. H. McNamara, Colonel J. F. Supple, Surgeon-Lieutenant-Colonel H. F. Hensman (late 1st Life Guards), Lieutenant-Colonel J. C. Dorman, Lieutenant-Colonel H. Grier, Lieutenant-Colonel A. Keogh, Lieutenant-Colonel W. A. May, Lieutenant-Colonel R. North, Lieutenant-Colonel A. P. O'Connor, Lieutenant-Colonel A. T. Sloggett, Lieutenant-Colonel J. F. Williamson, Lieutenant-Colonel O. G. Wood, Surgeon-Major C. R. Kilkelly (Grenadier Guards), Major W. G. A. Bedford, Major A. Dodd, Major J. Fallen, Major C. E. Faunce, Major R. J. L. Fayle, Major N. C. Ferguson, Major R. W. Ford, Major S. F. Freyer, Major W. L. Gray, Major T. W. O'H. Hamilton, Major R. Jennings, Major F. W. C. Jones, Major S. F. Lougheed, Major R. J. McCormack, Surgeon-Major C. A. Munn, Major F. J. Morgan, Major C. R. Nicholl, Major T. J. O'Donnell, Major H. J. Peard, Major W. W. Pike, Major A. F. Russell, Major M. W. Russell, Major R. J. S. Simpson, Major B. M. Skinner, Major A. A. Sutton, Major H. C. Thurston, Major F. B. A. Tuckey, Major G. R. Twiss, Major A. A. Watson, Major H. A. Cummins, Captain T. B. Beach, Captain H. J. M. Buist, Captain N. Falchnie, Captain C. W. R. Healey, Captain F. S. Heuston, Captain A. W. Hooper, Captain E. M. Morphew, Captain F. J. W. Porter, Captain F. W. Begbie, Captain A. F. Tyrrell, Lieutenant H. Ensor, Lieutenant R. S. H. Fuhr, Lieutenant E. T. Inkson, Lieutenant W. H. S. Nickerson, Lieutenant C. J. O'Gorman, Lieutenant W. R. Blackwell, Lieutenant R. B. Knox, Lieutenant F. G. Palmer, Colonel W. D. C. Williams (New South Wales A.M.C.), Surgeon-Major A. N. Worthington (attached Royal Canadian Artillery), Surgeon-Lieutenant C. B. Keenan (Strathcona's Horse), Surgeon-Captain R. C. Perkins (Brabant's Horse), Surgeon-Major Holmden (British S. A. Police), Surgeon-Lieutenant-Colonel C. B. Hartley, V.C. (Cape Med. Staff Corps), Surgeon-Lieutenant A. J. Ortlop (Diamond Fields Horse), Surgeon-Major W. F. F. Davies (Imperial Light Horse), Dr. Leslie (Roberts's Light Horse), Surgeon-Captain C. P. R. Wall (Transkei Mounted Rifles), Dr. A. H. Hopkins (Cape Colony), and Civil Surgeon A. E. Ross.

THE RESULTS OF SANITATION IN THE AUSTRO-HUNGARIAN NAVY.

The good effects of paying attention to sanitary matters are well brought out by Dr. Okuniewski of the Austro-Hungarian Navy in a statistical report on the health of that service which he has compiled for the years 1898–99. A quarter of a century ago the admissions to hospital from the fleet, ashore and afloat, were equal to 1641 per 1000 of strength, but ever since then the numbers have been steadily going down. During the last decade the sick-rate fell to 643 per 1000, while for the biennium 1898–99 it was only 547 and 467 per annum respectively. The great amelioration thus indicated is due to a notable diminution in most of the preventable diseases. At Pola, for example, which formerly

used to be called "the home of fever," the admissions on account of malarial affections have fallen to about 30 per 1000 from upwards of 800, the improvement being partly owing to quinine prophylaxis, but in the main to drainage and other sanitary works. But notwithstanding the gratifying evidence of progress thus afforded there still remains room for sanitary improvement at Austria's chief naval station. Typhoid fever continues to commit sporadic ravages every year amidst the population, civil and militant alike, while periodically the disease is said to attain to the dimensions of an epidemic. In order to combat this unfortunate condition of things several new regulations have been issued having reference to the water-supply and its distribution, the markets, and the disposal of sewage, and it is hoped that their execution will prove effectual in controlling the infection. Amongst the diseases which some years since used to swell the naval sick-list to an inordinate extent but which have now almost completely vanished trachoma, scurvy, and small-pox were the most widespread. In 1879 the first-named affection was responsible for 39 admissions yearly per 1000 of strength, and whole ship's companies used to be placed *hors de combat* by the other two. During the last 10 years, however, scurvy may be said to have entirely disappeared from the naval service, although still prevalent to a considerable extent in the army, while, thanks to a rigorous supervision of vaccination, the sick-rate from small-pox has fallen to 0·2 per 1000. Tuberculosis is far less common now than formerly but it still gives rise to three admissions per 1000 and is likewise blamable for much of the loss by death and invaliding. This continuance of an avoidable disease is regrettable, but the sanitary officials are fully alive to the importance of preventive measures, including a stricter examination of recruits, and in all probability the next few years will see a progressive lessening of all the rates. The disability in the navy from venereal disease has diminished during the last 20 years from 104 to 90 per 1000 of strength, the improvement being ascribed to the infrequency of relapses which has attended on a better system of treatment. In the Austrian army the venereal admission ratio is only 60 per 1000 of strength, and, according to Dr. Okuniewski, a similar disproportion in the incidence of the disorder is observable in the naval and military forces of Germany, England, and Italy. The bacterial laboratory at the Pola Naval Hospital has been the scene of two very interesting discoveries. In the first place it was proved that typhoid bacilli conserve their activity and virulence for a period of 20 days in oysters; and, secondly, the important fact was established that the fermented juice of the grape is very highly inimical to the same noxious microbes. Wine infected with typhoid bacilli was invariably found to be sterile after 24 hours. In concluding his interesting report Dr. Okuniewski draws attention to the excellent results obtained at the dental institution which was recently opened at Pola for the benefit of the navy.

TRANSPORT IN WAR.

We have so frequently called attention to the extreme importance of adequate transport in war that the subject must have become wearisome to our readers. One of the greatest difficulties with which the army and the medical service had to contend in South Africa arose from the deficiency of transport, as anyone may perceive who will read what Lord Roberts has said on the subject in his separate report, which has just been published, on the field transport in South Africa. Nor is the British army the only one that has to encounter the transport difficulty and manifest its shortcomings in this respect. The transport arrangements of the German army have, as we now know by a telegram from Peking, broken down under the test of field service in China, where the fighting has not been severe, and a committee has been appointed by Count von Waldersee to inquire into and report upon the causes. The army organisation of the Germans has been always held up as model. This might probably prove to be the case in a big continental war, but it is quite a different matter where the war is at a great distance in the far East and where the land transport arrangements are partly dependent upon what can be conveyed by shipping from Germany, but chiefly upon what can be obtained in the country which is the seat of war.

LORD ROBERTS'S DESPATCHES.

The commendatory despatches of the late Commander-in-Chief at the seat of war in South Africa which have just appeared in the *London Gazette*, will very naturally be read with great interest by all concerned. The Field Marshal passes in review all the leading officers of the campaign whose names are more or less familiar to the public and gives his estimate of the services which they have rendered, as well as his opinion of the work done by the various branches of the service. Our readers will see for themselves what Lord Roberts, in a somewhat lengthy notice, has to say about the Army Medical Service, the civilian and colonial surgeons, the hospitals, hospital ships, and the nursing element. It will be seen that while Lord Roberts highly commends the Army Medical Service as a whole, and alludes especially to the bravery and devotion displayed by so many of the officers of the Royal Army Medical Corps, his praise is to some extent qualified.

THE FRENCH "RED CROSS" IN CHINA.

The French Red Cross Society has rendered important services to the troops of its own nationality engaged in China. Last August a hospital ship named *Notre Dame du Salut* was despatched into Eastern waters, having on board in addition to its own establishment sufficient *personnel* and equipment for two stationary hospitals on shore, and according to a recent account one of these, for 180 patients, has been opened at Nagasaki. The *Notre Dame du Salut* then proceeded to Taku where it afforded aid to a number of sick and wounded French soldiers and sailors, 253 of whom it subsequently brought back to France. Altogether the number of patients treated at Nagasaki as well as on board the Red Cross hospital ship was 656, but full particulars have not yet come to hand. Two hospital ships belonging to the Japanese Red Cross Society, and named respectively *Hakuai-Maru* and *Rosai-Maru*, have also been doing good work in the Gulf of Pechili.

MILITARY AND NAVAL COOKS.

Lord Roberts has given his special sanction to the troops in London to take part in the Army Cookery Contests at the forthcoming Universal Cookery and Food Exhibition which will be held at Knightsbridge from June 11th to 15th. The troops who will be in the London district at that time and who will consequently take part in the competitions will be the Grenadier, Scots, and Coldstream Guards, and (for the first time) the Irish Guards, and also the Wiltshire Regiment. Sailors undergoing training, or who have been taught at the Nautical Cookery Schools of London, Liverpool, North Shields, and Glasgow, will take part in special naval and mercantile marine cookery competitions. The Mercantile Marine will also be represented by boys from various training ships. This section will be under the direction of Alderman J. F. Spence, J.P., of Tynemouth.

Correspondence.

"Audi alteram partem."

"THE TEACHING OF ANÆSTHETICS."

To the Editors of THE LANCET.

SIRS,—In my letter in THE LANCET of Jan. 19th, p. 212, I expressed regret that Lieutenant-Colonel Lawrie had, under the guise of supporting a movement in favour of the recognition of anæsthetics as a necessary part of the medical curriculum, again opened up the chloroform controversy. I contended that the time had not yet arrived for the discussion of what should be and what should not be taught; and Lieutenant-Colonel Lawrie admits, in his letter in THE LANCET of April 6th, p. 1041, the force of this contention. It will be time enough, when the examining bodies have made some system of instruction compulsory, to inquire into, and possibly extend, the present plan of teaching. But although Lieutenant-Colonel Lawrie fully realises this he cannot resist the temptation of continuing his laudable task of collecting and replacing the numerous fragments of the Hyderabad idol. I can only again express my regret that he should persistently obtrude this mending process upon a weary audience. Were there any real worth in his suggestions one might excuse their prematurity; but I fail to find any such worth. I would even go further than this and assert that the suggestions made by him are positively dangerous, and it is for this reason alone that I propose to criticise at some length the position which Lieutenant-Colonel Lawrie has taken up.

In the first place, Sirs, let me remind your readers that a

very important change in what may be termed the standard of anæsthesia has almost imperceptibly come about within the past quarter of a century. To put this change in plain words, I may say that the surgeon of to-day—at all events the surgeon of to-day practising in England—not only requires that his patient shall be rendered rapidly unconscious without inconvenient excitement, but that he shall be kept throughout, even for minor operations, in a state of complete muscular relaxation and immobility. Such are the demands of modern surgery—at all events in this country—and it is the duty of instructors in anæsthetics at our hospitals to send out into practice men who will be able to meet the requirements of the modern surgeon. It is not to be wondered at that this change in the standard of anæsthesia has taken place, for even in comparatively minor operations the surgeon who is particular about his results very naturally requires more at the hands of his anæsthetist than the surgeon who practised when only crude methods of anæsthetisation were known to the profession. The value of the assistance given by skilful anæsthetists in such operations as those of abdominal surgery is fortunately becoming more and more widely recognised. The modern anæsthetist has, in fact, to meet demands created by others. Now this means that the anæsthetic which should be employed by the average medical man must be one which can be given in such a way as to eliminate excitement and to such a profound degree of narcosis that no inconvenient reflex phenomena occur. Chloroform is therefore not suitable, whilst ether fulfils nearly every requirement.

I am amused at Lieutenant-Colonel Lawrie's statements as to the London teaching. He affirms that "in London there is no practical teaching in anæsthetics worthy of the name." Now not only is this statement utterly erroneous (as the letters of Dr. Dudley Buxton and Mr. H. Bellamy Gardner in THE LANCET of April 13th, pp. 1104 and 1105, show), but the author of it asks us in the same breath to revert to modes of anæsthetisation which were in vogue in our student days and which have long since been replaced, thanks to the work of Clover, by more suitable methods. Let us examine the advice so magnanimously proffered to the English anæsthetists. Let us submit this advice to some of our leading surgeons. In one of our journals[1] a few years ago Lieutenant-Colonel Lawrie, speaking of his Hyderabad system of anæsthetisation, made the following remarks:—

> The old prejudice against beginning an operation before the patient is "over" was finally cast aside in 1895, and since then nearly all minor operations have been performed under partial anæsthesia with chloroform ..... it is now established as a routine method of practice. ..... The only drawback to it is that reflex struggling may be set up occasionally on the infliction of the wound, but this is merely a temporary inconvenience which can be removed if necessary by pushing the chloroform until struggling ceases or until anæsthesia is complete.

In a work recently published by Lieutenant-Colonel Lawrie[2] the following significant statement appears:—

> Two or three assistants should always be present when chloroform is given, because in a certain percentage of cases it produces excitement and intoxication and the patient may struggle so violently as to become unmanageable if assistance is not at hand.

Perhaps the cheapness of labour in India may render it possible for a retinue of assistants to accompany every medical practitioner when called upon to administer an anæsthetic; but it is fortunately unnecessary for us in this country to adopt such stringent precautions as Lieutenant-Colonel Lawrie suggests.

Again, let us listen to the directions for anæsthetising young children.[3]

> The way to make a young child breathe regularly is to make it cry by holding the chloroform cap close down over its mouth and nose until it becomes unconscious and quiet.

It is, I think, unnecessary to further criticise the above doctrines; they speak for themselves.

In the next place a few words as to the statistics which I quoted. They were not intended to throw into relief the merits of this or that method of administering any given anæsthetic. But even when ingeniously rearranged in tabular form by Lieutenant-Colonel Lawrie they certainly show all that they were intended to show—viz., the lethal influence of chloroform as compared to other anæsthetics in dental surgery. They were compiled on the assumption, which I still hold to be permissible, that in a given period, say of 15 years, the dental anæsthetic death-rate per 1,000,000 would be about the same in Scotland as in London, provided the same anæsthetic were used; whereas if in Scotland chloroform were, as is the case, the routine anæsthetic, and if in London nitrous oxide and ether were, as is the case, the routine anæsthetics, then any marked differences in death-rates might be fairly ascribed to the influences exerted by the anæsthetics themselves. The appalling influence of chloroform as an anæsthetic in dental surgery is thus clearly illustrated, for there were in the 15 years no fewer than 14 deaths in Scotland (12 of them taking place in association with chloroform), whilst in a corresponding period of time there were only two deaths (both under nitrous oxide) in London; and this direct comparison is fortunately rendered possible by the fact that the population of Scotland was, according to the census returns (average between 1881 and 1891) almost equal to that of London.

With figures such as these it is, to my mind, almost incomprehensible that Lieutenant-Colonel Lawrie should still insist on the safety of chloroform in dental surgery. His contention is that by a combination of Syme's principles, certain Eastern developments of those principles, the presence of two or three assistants, and the establishment of partial anæsthesia the risks of this anæsthetic almost or completely cease to exist. But, as I have shown, the so-called Hyderabad methods, even if there were any real merit in them, would be utterly impracticable in this country. Our requirements are of a totally different order to those which apparently exist in India; and we therefore find it necessary to employ anæsthetics and methods which will meet our needs. Lieutenant-Colonel Lawrie's attitude forcibly reminds me of that which might be adopted by a swimming-master, surrounded by a crowd of admiring pupils each of whom has learnt under the able guidance of his instructor to swim across a shallow river with one foot touching the bottom and assistance within easy call. It is quite clear that a long and unbroken record of successful passages from shore to shore might, under such circumstances as these, be chronicled, but what should we think of such statistics? I must leave the profession to answer this question.

All that Lieutenant-Colonel Lawrie's contributions to the clinical study of chloroform demonstrate is that when given to a partial degree and with a due regard to respiration this drug is safer than it otherwise would be. But is it necessary to beat the big drum to announce this fact? That the chloroform death-rate may be reduced by working upon such lines almost goes without saying, but his crude plans of procedure would certainly not be tolerated in the practice of any leading English surgeon. Some years ago Lieutenant-Colonel Lawrie came with two assistants to the London Hospital and chloroform was administered in the Hyderabad fashion in two straightforward cases. But the type of anæsthesia produced was distinctly inferior to that which may be witnessed any day of the week in the operating theatres of our hospitals. A case presenting greater scope for skill in anæsthetising was prepared for Lieutenant-Colonel Lawrie at University College Hospital, but although the theatre was crowded in expectation of his arrival he failed to put in an appearance.

In summing up this matter I fail to see what there is to be learnt from Lieutenant-Colonel Lawrie's writings. When one realises the simplicity and crudeness of his methods one can readily understand his statement that he finds "a month of clinical teaching more than sufficient to render the average student capable of administering chloroform"; nor, considering the type of his "anæsthesia," is it surprising that he leaves the anæsthetising "to students and nurses of no special endowments."

Interesting as this correspondence has been, I fear I must decline to continue it further, for I cannot conceive that any useful purpose can be served by discussing such inconvenient and obsolete means of anæsthetisation as those advocated by Lieutenant-Colonel Lawrie.

I am, Sirs, yours faithfully,

FREDERIC W. HEWITT.

Queen Anne-street, W., April 13th, 1901.

[1] Brit. Med. Jour., July 31st, 1897.
[2] Chloroform, 1901, p. 47.
[3] Op. cit., p. 52.

"THE ROYAL ORTHOPÆDIC HOSPITAL."

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a leading article in THE LANCET of April 6th, p. 1025, with reference to the affairs of the Royal Orthopædic Hospital, which is obviously

based upon a letter signed "Hospital Governor" printed in THE LANCET of March 23rd, p. 893.

You have been misled by "Hospital Governor." He is an untruthful person who makes false charges anonymously which he probably will not care to repeat over his own signature. I have never stated that "the value of the hospital site is 30 years' purchase at £1500, or a sum of £45,000." I have never stated (as reported in your leading article) that I obtained my majority by votes specially created "for the purpose of resisting the scheme of selling the site of the hospital."

The opinion of THE LANCET on all hospital matters is of unquestionable value provided that it is based upon accurate information. Such information may be had for the asking if you desire it, and from persons who will be prepared to supply it over their own names. The information of "House Governor" is not accurate and has not been sent to you in the interest of the hospital.

I am, Sirs, yours faithfully,

April 11th, 1901. H. H. MARKS.

*** We desire information strongly. We wish to know why the present site of this hospital is being sold.—ED. L.

"LEGISLATION AGAINST NATIONAL INTEMPERANCE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 23rd, p. 578, I stated that temperance legislation had been tried on a very wide scale in the civilised world, and challenged temperance reformers to mention a single instance of successful legislation under conditions half as onerous as the least onerous that prevail in England—namely, in Westmorland, where the population is 84 to the square mile. In THE LANCET of April 6th, p. 1040, I referred to that challenge, and stated that I had received no reply and that I anticipated none. I was wrong. Dr. T. S. Clouston has accepted the challenge. He instances Norway. But in Norway the density of the population is only 17 per square mile.[1] In other words, the density of population in Norway is not half but nearly five times less than in Westmorland. Dr. Clouston, therefore, has not observed the conditions of the challenge. Nevertheless, I am willing to waive the point. He states that owing to legislative interference the consumption of spirits has fallen from 16 litres per head to 3·3 in Norway. He omits to mention that the consumption of beer[2] and laddevin[3] has risen enormously. In 1897 in Christiania, the capital of Dr. Clouston's "sober" land, the arrests for drunkenness were 94 per 1000 of the population.[4] In London they were 7·35.[5] In New York 13 in the year 1893.[6] In Chicago 23.[7] In Portland, the capital of the classic prohibition State of Maine, 42.[8] In Boston, which is not a prohibition city, 45.[9] But Boston is surrounded by a prohibition area, whence nearly half its inebriates are derived.[10]

Drunkenness has greatly increased in Norway of late years. Thus in Bergen, the second largest town, the arrests for drunkenness per 1000 of the inhabitants were 12·1 in 1893. In 1899 they were 25·9.[11] The Scandinavian method of temperance reform took origin in Gothenburg, whence its name. In 1895 the arrests for drunkenness in that city were 33 per 1000. In 1899 they were 58 per 1000.[12] The increasing drunkenness of Gothenburg is admitted on all hands except by the inn-keepers and brewers who are interested in the sale of beer.[13] Dr. Clouston's reference to Norway is evidently not happy. Judged by the police returns its inhabitants are drunken to an extraordinary degree. He may, of course, argue that, since conditions vary police returns are fallacious. But consider the case of Portland, where only the drunken *and* disorderly or incapable are now arrested, the merely drunken being too many for police control.[14] Dr. Clouston has appealed to Messrs. Rowntree and Sherwell and I have restricted my reply to their pages. They are "temperance reformers," but, on the whole, their book is the most telling indictment of "temperance reform" that ever yet was penned.

Dr. Clouston would permit moderate drinking, but would suppress drunkenness. His aim is laudable, but unfortunately all attempts to attain it have resulted hitherto only in the suppression of the moderate drinker. The *per capita* consumption of alcohol is easily lowered by the imposition of repressive legislation, but the actual amount of drunkenness generally rises *pari passu*. A more extended study of Messrs. Rowntree and Sherwell's book will afford your correspondent plenty of evidence of this curious and significant fact. The *per capita* consumption of alcohol is very high in the wine countries where the amount of drunkenness is least.[15]

Dr. Clouston states that 99 per cent. of my professional brethren believe that parental drinking is a cause of filial degeneration. I dare say he is right. For years I have protested against the prevailing medical neglect of modern teachings of heredity. Will any member of his great majority supply evidence that parental drinking *does* beget filial degeneration? I personally am prepared to supply conclusive evidence that it does not. I fear I have already exceeded the limits of your space, but there are one or two of Dr. Clouston's remarks that I ought not to leave unnoticed. He says pretty plainly that I advocate the spread of disease and drunkenness. Will he be good enough to supply chapter and verse? He says that I incur a great responsibility and that I ought to be very sure of my ground. I fully recognise the responsibility, but I happen to be very sure. The history of "temperance reform" on the lines advocated by Dr. Clouston embraces almost the whole world, and extends over thousands of years. It is one long record of disastrous and demoralising failure—of failure which has grown more and more immediate and complete with the increasing density of the world's population and the increasing complexity of the world's civilisation. My responsibility is shared by others—by those who continue to advocate methods of temperance reform which were proved impracticable a thousand years ago.

I am, Sirs, yours faithfully,

Southsea, April 14th, 1901. G. ARCHDALL REID.

To the Editors of THE LANCET.

SIRS,—Dr. T. S. Clouston's contributions in THE LANCET of April 6th (p. 1039) and 13th (p. 1103) are in many ways welcome. As pointed out in your leading article of March 23rd (p. 873) your correspondent has made some useful observations recently on the alcohol question and is entitled to a respectful hearing, and he now enters the lists in response to your comparison of him to Sir John Simon and Snow. Permit me, Sirs, to confine my remarks chiefly to an examination of his first letter, the second being a direct challenge to Dr. Archdall Reid himself. Dr. Clouston's opening contention that the alcohol question can and must be solved "through the application of scientific facts and principles" is the fundamental doctrine of the Reid school, which it is a pleasure to find him enunciating for himself. But it is disappointing to find that his scientific facts are entirely elementary. The fact that alcohol is injurious was known to the world thousands of years before physiology became a science and the microscope was invented. Kraepelin's experiments and the details of pathological morphology which constitute Dr. Clouston's scientific facts are interesting as confirming common knowledge, but the public will have nothing but contempt for us as a profession if we now propose action on the ground of these undisputed observations years after a more liberal-minded laity have begun action, if imperfectly, on the ground of common observation and experience. But if it is impossible to discover in Dr. Clouston's letters any other facts which may be called scientific it is easy to point out much argument which has no foundation in science. It is not possible to deal with all of this in the limits of a letter, but one or two points cannot be passed over.

In his first letter (April 6th) we find Dr. Clouston brushing airily aside the only attempt that has been made to deal scientifically with the temperance problem. Dr. Reid's work upon the alcohol question, which includes a scientific study of every aspect of the subject and an indication of a possible road to a permanent solution at last, is thrust away without discussion in

[1] The Temperance Problem, by Rowntree and Sherwell, p. 471.
[2] Op. cit., p. 476.
[3] Op. cit., p. 475.
[4] Op. cit., p. 487.
[5] Op. cit., p. 677.
[6] Op. cit.
[7] Op. cit.
[8] Op. cit.
[9] Op. cit., p. 158.
[10] Op. cit., p. 313.
[11] Op. cit., p. 483.
[12] Op. cit., p. 461.
[13] Op. cit., p. 483.
[14] Op. cit., pp. 159, 16.
[15] Op. cit., p. 613.

the company of transcendental theories of heredity which have nothing to do with the subject, by one who professes to take his stand upon scientific grounds. Dr. Reid's edifice, built upon a solid scientific base, is to be ignored while Dr. Clouston raises flags in exultation over half a dozen loose bricks. But your correspondent is not content to magnify the importance of a few physiological experiments and microscopic pathological facts and to proclaim Dr. Reid's work to be of no importance; he goes on to use the vague stock utterances of those to whom nobody looks for scientific enlightenment. What ground has he for the assertion that "adverse hereditary influences" and "toxic interference with the germ plasm," &c., "make for national decay"? How does he propose to prove that drunkards "hand down a progeny with all their own tendencies accentuated"? If he possesses evidence to prove these statements then, Sirs, once more let us beg that it may be forthcoming. But if, like "M.D., B.S. Lond.," and Mr. A. Marsden, your correspondent shrinks from being hailed the first great discoverer of this century—the discoverer of a transmitted acquired character—I trust that at least he will examine the contentions of Dr. Reid more closely.

Dr. Clouston's second letter, curiously enough, is directly concerned with the doctrines he declares to be of no account, but he has exercised his mind during a week only to collect opinions similar to his own that the acquired effects of disease and alcohol are transmissible. It ought to be unnecessary to remind Dr. Clouston that preconceived opinions do not alter facts and often must vanish before a scientific exposition of facts; he will find confirmation of this truism in the history of Darwinism and of Listerism and of every epoch-making theory, and also, alas, precedents for his own remarkable attitude. Even in recent times the opinions of the medical profession have, despite opposition such as your correspondent now offers, undergone transformation—e.g., regarding the transmissibility of tuberculosis and even regarding the value of alcohol in the treatment of disease. His appeal to authority is of no scientific value—nay, it is of no controversial value—in face of the fact that Dr. Reid's views have lived already for over five years and that not one of his arguments has been proved fallacious by his crowd of assailants. If Dr. Clouston had read "The Present Evolution of Man" he would not have found it necessary to inquire for Dr. Reid's proofs that neither disease nor drink affects the offspring; he will find them in that book founded on Darwinism, on Evolution, which he will remember Huxley pronounced to be no longer a speculation but an historical fact. A study of them will place him in a position to bring forward any conflicting evidence which he may possess or will compel him to go through the painful process of revising his convictions.

The last point to which I must refer is contained in the following sentence: "Another thing the medical profession is specially fitted to do, and that is to judge rightly the safe limits of the pleasures and the social and personal amenities which alcohol in physiological quantities may secure, and to pick out the persons who can safely indulge in such pleasures." This I take to be a grave statement that Kraepelin's experiments or some other researches which are not specified have conferred on the profession the power to measure with precision the personal equation in regard to alcohol. But we are left to wonder how the power is cultivated, whether it is anything more than that possessed by every good judge of character, and how the statement quoted is to be reconciled with the equally emphatic one of those who maintain on the ground of experiment that alcohol is injurious to all men, even when taken in moderation. Why does not Dr. Clouston in the courage of this conviction propose amongst his legal provisions an examination of every individual at the right age by a board of experts in order to determine this personal equation and issue certificates permitting the proper amount of pleasures and amenities? Perhaps Mr. W. S. Gilbert may be induced to supply the omission. It is scarcely necessary to examine in detail the proposals for legal provisions with which Dr. Clouston's first contribution closes. He is no doubt aware, even if he has perused Messrs. Rowntree and Sherwell's admirable work only in a cursory manner, that practically all of his proposals have been tried on a large scale in America, New Zealand, Scandinavia, and elsewhere and have failed dismally; but he advances no reasons why such measures, even when rechristened "scientific," should be successful at home.

Allow me, Sirs, with all deference, to suggest to your correspondent that it is unfair as well as unscientific first to proclaim as of no account, then to condemn on no evidence, and lastly to misrepresent views with which he is not in accord. Whatever may be the characteristics of "the pursuit of a fatalistic inertia" nothing can be further from the truth than to suppose that the Reid doctrine implies in regard to alcohol that natural selection must be left to take its course, or to suppose that there is any desire to "put a spoke in the wheel of health reform and social amelioration." Dr. Clouston evidently is unacquainted with Dr. Reid's remedy just as he is with his facts. The Reid school takes its stand on science, is zealous for the race as well as for the individual, and believes that they may be benefited together once the true (and at first sight not obvious) scientific facts are recognised more generally.

I am, Sirs, yours faithfully,
H. LAING GORDON.

Honor Oak-road, S.E., April 15th, 1901.

To the Editors of THE LANCET.

SIRS,—After Dr. T. S. Clouston's able defence in THE LANCET of April 13th, p. 1103, of the position taken up by me in my letter of March 23rd, p. 892, I need scarcely trouble you with any further remarks in reply to Dr. Reid's onslaught. After reading Dr. Reid's letter I could only conclude that he knew nothing of the homes of the drunken poor and the lives that their wretched offspring have to live and that the lessons of all past sanitary and social reforms have been lost upon him. We have heard of the "ocean and the broom" before, but will Dr. Reid please tell me if the chances of two young pretty girls growing up into healthy, respectable mothers are the same, when you place one behind a bar and the other in, say, his own house, to look after his children? There seems to be a difference of point of view in the case of Dr. Reid (and other members of the Society for the Study of Inebriety) and that of social reformers. I agree with Dr. Reid that if you surround a drunkard with public-houses and give him his freedom no legislation will make him sober, but I still maintain that society has the power to limit the creation of drunkards. I am, Sirs, yours faithfully,

April 16th. M.D., B.S. Lond.

CONTINUOUS ADMISSION OF AIR DURING ETHER ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—Some months ago I pointed out in THE LANCET the ease with which chloroform could be administered from a Clover's ether inhaler when the bag had been removed. Modifying the same idea to the administration of ether, I find that, after inducing full anæsthesia with nitrous oxide followed by ether, it is possible in many patients to maintain the anæsthesia with the bag removed and the indicator turned nearly or quite on to full. By so doing the patient gets a supply of fresh air mixed with the ether at each inspiration, instead of one or more inspirations of air at intervals when the face-piece is raised, the patient between these intervals breathing in and out of the bag. The supply of air is thus made continuous instead of intermittent. The result is that the asphyxiation symptoms of ether anæsthesia are largely avoided, the breathing being comparatively quiet and the face pink instead of cyanosed, these differences being very marked. The method involves the use of a larger amount of ether than when using the bag, but this is more than compensated for by the improved type of anæsthesia.

I am, Sirs, yours faithfully,
C. HAMILTON WHITEFORD,
Senior Anæsthetist, South Devon and East Cornwall Hospital.

Plymouth, April 12th, 1901.

MAJOR-GENERAL BADEN-POWELL'S DESPATCH re MAFEKING.

To the Editors of THE LANCET.

SIRS,—The following appears in Major-General Baden-Powell's despatch: "Victoria Hospital (Base Hospital), 70 beds: Major Anderson, R.A.M.C., principal medical officer: Dr. W. Hayes (*acted as P.M.O. during the first part of the siege*), &c., &c." Further on again: "On outbreak of war," the General writes, "I took over the Town Hospital [Victoria Hospital], but at first the administration was not satisfactory, on account of the want of supervision over

expenses of stores and sanitation. I therefore appointed an issuer and store-keeper and a sanitary inspector, &c., &c." The orders of the day published at Mafeking on Oct. 10th, 1899, contains the following: "*Defences:* W. A. Hayes, Esq., M.R.C.S. Eng., L.R.C.P. Lond., is placed in charge of all medical and ambulance arrangements in connexion with the defences of the town of Mafeking." The orders of the day dated April 30th, 1900, contain the following: "*Appointments:* Owing to the illness of Dr. W. Hayes, Major Anderson, principal medical officer of the Defence Forces [the Protectorate Regiment], will take over charge of the Victoria Hospital with effect from the 27th inst." On April 27th I got severe blood-poisoning and was confined to bed—*that is, 20 days before the siege ended.* From the despatch quoted it would appear that Major Anderson, R.A.M.C., acted as principal medical officer during the greater part of the siege; as a matter of fact, he only acted as such for 20 days.

I am, Sirs, yours faithfully,

Mafeking, March 21st, 1901. W. A. HAYES.

AUTHORS' AGREEMENTS.

To the Editors of THE LANCET.

SIRS,—The reviewer of the current "Literary Year-book" in THE LANCET of April 6th, p. 1020, has a right to his opinion that my article on the above subject is "ill-informed"; but you will allow me, I feel sure, to correct him as to a matter of fact. He does me a grave injustice in calling attention to what he considers a damaging omission, where I neglect to mention "the royalty which an author might fairly expect to receive under the royalty system." Need I say that the omission is intentional; that the avowed intention of the article is to consider *forms of agreement* in general—not any particular instance; and that, finally, if I were required to give the "royalty which an author might fairly expect to receive under the royalty system," it would be first necessary for him to submit to me data governing a particular case before I could do so—i.e., "an author's" name, his manuscript, and the name of the publisher considering it. In trade there is no such thing as a fixed, abstract, or "ideal price" for anything irrespective of its market.

May I add that your reviewer has perhaps written in ignorance of the fact that no less than 13 pages of the latter part of this work are devoted to "tables of royalties," from which any person of average intelligence might, without distressing it, have inferred: (1) that an average royalty is 10 per cent., since it comes exactly mid-way between the two extremes—2½ and 20 per cent.; and (2) that, postulating a certain sale for a book at a certain price, an author is at once placed in a position to decide from the results shown on these tables whether a royalty offered him by a publisher affords a fair return for his labour.

I am, Sirs, yours faithfully,

Burleigh-mansions, W.C., April 12th, 1901. CHARLES WEEKES.

*** Our reviewer, to whom we have submitted Mr. Weekes's letter, replies as follows: "I had no doubt that the omission of all indication as to what royalties should be expected by an author was intentional. But by the omission the whole section of the article dealing with royalties is rendered useless to authors who are surely concerned in the contents of a literary year-book. The publication of books in general was not apparently being discussed by Mr. Weekes under the royalty system, but only that of fiction (see page 28), a limitation which I pointed out before criticising the article. It should have been perfectly easy for Mr. Weekes to indicate what sort of novel by what sort of author would carry a royalty of 25 per cent., and what writers must put up with 10 per cent., the royalty that he now tells us is an "average" one, whatever that may mean. I knew that the book contained tables of royalties, though Mr. Weekes makes no reference to them in his article. The tables are arithmetical guides, quite useful, but in no way supplying the deficiency in Mr. Weekes's article—a deficiency which, to my mind, stultifies his editor's prefatory promise of impartiality."—ED. L.

SUCCESSFUL OPERATION IN FULMINATING APPENDICITIS.

To the Editors of THE LANCET.

SIRS,—In the report in THE LANCET of April 13th, p. 1083, of a case of appendicitis related by me at the last meeting of the Kidderminster Medical Society it should have been stated that the consultation was held and the operation was performed on the Monday when acute diffuse peritonitis had occurred. Had it been a case of "localised peritonitis," as appears in your report the patient's recovery would not have been remarkable, but the mortality after operation in these fulminating cases is so appalling that successful cases are worthy of record.

I am, Sirs, yours faithfully,

J. LIONEL STRETTON,
Senior Surgeon, Kidderminster Infirmary and Children's Hospital.

Kidderminster, April 14th, 1901.

"GNATS AND MOSQUITOES."

To the Editors of THE LANCET.

SIRS,—My recently published "Handbook" on this subject is out of print, and my publisher has telegraphed to me in India that a reprint, to supply an urgent demand, is necessary. Our knowledge of the life-history and habits of the malaria-carrying species is, however, growing so rapidly that a mere reprint appears to me out of the question—at any rate as regards the first or general part of the work. Will you kindly permit me to state through your columns that a new issue brought as far as may be up to date will be ready in May? I am, Sirs, yours faithfully,

G. M. GILES,
Lieutenant-Colonel, I.M.S.

"POST-PARTUM HÆMORRHAGE."

To the Editors of THE LANCET.

SIRS,—I have been much interested in the graphic paper by Mr. E. Stanmore Bishop on Post-partum Hæmorrhage in THE LANCET of April 13th, p. 1069. Having had an extensive midwifery practice in the past amongst the "well-to-do" I have had what I presume would be considered a fair average number of these bleeders, and I recall my terrible anxiety as to the result even now with a shudder which he so vividly depicts in his paper. These cases would come on regularly time after time in the same people. The labour would be quite an ordinary one, the placenta and membranes coming away without exertion or hurry, the uterus contracted, abdominal bandage put on, and everything seeming right. In 20 minutes' time the uterus would relax and the most alarming hæmorrhage come on. This has been the history of a large number of these bleeders in my experience. It is not necessary for my object to narrate the different methods employed; but though I never had a death from post-partum hæmorrhage it is a marvel to me that none succumbed. When engaged to attend these ladies in a subsequent confinement I knew what would happen and I went in dread—ergot in full doses, hot-water intra-uterine injection, &c., notwithstanding. At last one day, when everything seemed to fail, in desperation I plugged the vagina well up to the cervix, at the same time holding the uterus firmly down into the pelvis. Then having the patient on her back, I fixed a large firm cushion pad, book or pin-cushion, just above the uterus and bound it so firmly by bandage that it was impossible for the uterus to expand. In most cases except in very fat persons this is very easily accomplished. There was no more hæmorrhage. In six hours' time the plugs were removed and the uterus was thoroughly syringed out with lukewarm water till not a trace of clot was visible. No further hæmorrhage resulted in any of these cases. This practice, I am aware, was very much opposed to the teaching of my day, but the result was so good in my first case that ever after when these bleeders were delivered it became my practice always to plug more deliberately and carefully as soon as the labour was completed and to fix down the uterus as I have described, being very careful not to allow more than six hours to elapse before removing the plug. The clots that were then removed were not large, proving that the uterus could not distend. It always seemed to me that the small soft clot of blood which remained stimulated the contraction of the uterine muscular tissue, and that the early removal of clots and plugs prevented the coming on of any septicæmic conditions. Certainly all hæmorrhage was stopped at once by this procedure. Having found such confidence and comfort from this in my own practice, and believing that with adequate cleanliness and antiseptic precautions it will be found a safe

method of practice in these terrible and most anxious cases, I venture to ask you to publish this letter.

I am, Sirs, yours faithfully,

April 15th, 1901. Z.

TITLES OF BOOKS PUBLISHED 1898-1900.

To the Editors of THE LANCET.

SIRS,—We are preparing to publish Volume VI. of the "English Catalogue of Books," 1898-1900, which completes the list of works produced during the century. As we wish to make it as complete as possible, may we ask those of your readers who have published books between Jan. 1st, 1898, and Dec. 31st, 1900, for the full titles, sizes, prices, month and year of publication, and author's and publisher's names, to be sent as soon as possible, addressed to Editor, "English Catalogue of Books,"

Care of yours faithfully,

SAMPSON LOW, MARSTON, AND CO., Ltd.

St. Dunstan's House, Fetter-lane, London, April 17th, 1901.

P.S.—Particulars of books which have already appeared in the *Publishers' Circular* or in the annual volumes of the "English Catalogue of Books" are, of course, not required.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Increase of the Plague Epidemic.—Success of the Dufferin Fund in Aid of Medical Relief to Women in India.—The Queen Victoria Memorial Fund in India.—Recovery of Medical Fees: a Novel Procedure.

PLAGUE has caused 11,560 deaths throughout India during the past week. The mortality is increasing with alarming rapidity in the Lower Provinces. Of the above total no fewer than 7315 deaths occurred in the Bengal districts. In Calcutta there were 1040 deaths. The plague cases reported in this city were 1199 against 993 during the previous week and the number of fresh living cases seen was 345. Disinfection continues to be extensively practised, not only in respect of the rooms and houses where the cases occur but in many of the adjoining houses. The process adopted consists in flushing the floors and spraying the walls with the standard solution of perchloride of mercury. Cases continue to occur in the disinfected quarters and it is impossible to show that the measure possesses much value. The outbreak in Calcutta now is more severe than that of last year notwithstanding the repeated disinfections which have been practised. As I have before remarked, however, the authorities are apparently able to account for nearly all the plague deaths and the investigations made after death indicate the exact location of the cases. The reported plague deaths in Calcutta nearly account for the excess mortality, and that is more than can be said for any other city. The disease is spreading in Benares and has reached to the cantonment. It continues to progress from village to village in the Gardaspur and Sialkot districts of the Punjab. In Bombay city plague has caused over 1000 deaths during the past week. An examination of the total deaths in this city since the plague appeared in 1896 shows an excess mortality over the average of 120,000. The official reports only give 60,000 deaths from plague since its commencement in September, 1896, so that there is a very large balance to be accounted for. If the system adopted in Calcutta had been applied to Bombay it is most probable that the greater part of this excess would have been found to be due to plague, and it is almost safe to say that Bombay city has lost 100,000 of its inhabitants from plague.

The Dufferin Fund has been a great success, and in the sixteenth report just issued is given an account of the medical relief afforded to women in zenana hospitals and dispensaries. Lady Curzon has actively interested herself in the movement and Lady Northcote has given liberally to the fund. There are hospitals which are wholly maintained by the association and others which are aided by the fund or have been started through its agency, and many of the female officers have been assisted in their studies from the fund. Over 247 hospitals were maintained and over one and a half millions of women and children were afforded medical relief during the past year. The hospitals are distributed all over India and some have been started by the liberality of native princes under the auspices of the association. There are no fewer than 379 medical women in various grades now studying in universities, schools, and classes throughout the country. The central provincial and district branches seem to be in a flourishing financial position, as it is stated that between them they possess invested funds of over 22 lakhs. The central committee in controlling this large organisation only spent Rs. 4850 on its entire office charges, which speaks volumes for the economy with which the funds are expended.

The Queen Victoria All India Memorial Fund now amounts to over 26 lakhs. This is on the basis of a maximum subscription of one lakh, but it will be remembered that several of the native princes offered five, 10, and even 15 lakhs apiece. Afterwards it was thought advisable to limit the maximum subscription as plenty of money was forthcoming. The towns and cities in the provinces contemplate having additional memorials of their own, and Delhi proposes to establish a Victoria Hospital for Women.

March 28th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Birmingham Consultative Institution.

ANOTHER phase in the attitude of the promoters of this scheme has just been displayed. It will be remembered that the present occupant of the post of consultant tendered his resignation some weeks ago, his duties to terminate on May 21st. This was thought by some to be a favourable opportunity for the reconsideration of the position between the profession and the authorities of the institution. No formal move has been made from either side, and nothing has been done beyond general expressions of opinion and a vaguely expressed wish for a friendly discussion. The members of the committee of the profession, at present the same as were originally appointed, have not been approached, though they are quite willing for a conference under proper auspices, such as those of the Lord Mayor of the city. The leading spirit of the movement is still of opinion, he says, that there is a large class between the absolutely poor and the fairly prosperous for whom some provision is required on terms within their means and on conditions which will not offend their self-respect. This pious opinion, therefore, is to constitute the demand which is to regulate the supply, that is, the price at which the consultations are to be fixed—namely, half a guinea each. Again and again it has been pointed out that most of the leading members of the profession are willing to see patients for this amount under certain safeguards as to the genuine position of the patients, any inquiry as to which is repudiated by the powers of the consultative institution. The committee have resolved to continue the institution upon the same lines, and with true commercial instinct as to the power of lucre they have issued advertisements for a consulting physician and a consulting surgeon at a salary of £500 a year each. The holder is to be debarred from general practice, and the requisites in either case are, the advertisement states, a high diploma from one of the Colleges of England, Scotland, or Ireland and hospital and other experience. It will be well that any aspirants should view the position carefully and above all that they should consider the honour and interests of their profession as the paramount motives of their lives.

Birmingham and Midland Hospital for Women.

The annual meeting of the subscribers of this institution was held on March 21st. The report stated that the number of new cases in the out-patient department had been 3323, the total number of new and old cases being 17,744. 427 patients had been admitted to the in-patient department—an increase of 23. The total number of operations had been 410—an advance of 26 as compared with last year. The number of cases of abdominal section had been 204, with six deaths. The financial statement showed an expenditure of £3045—£206 over the ordinary receipts. It was stated that the enlargement and rebuilding of the hospital were becoming an absolute necessity, and a scheme had been formed for carrying this out. The population of Birmingham and the immediate neighbourhood, it was pointed out, had increased 31 per cent. during the last 20 years, while the number of

beds in the hospital had gone down from 22 to 20. Various votes of thanks were passed.

Hospital Saturday Convalescent Homes.

The ninth annual reunion of those who have been patients at the Hospital Saturday Fund Convalescent Homes at Llandudno was held at the Town Hall on April 1st. It was stated that 11,535 patients had passed through the homes. They were supported entirely by the working men and women of the city after they had presented an annual sum of £10,000 to help to carry on the work of the hospitals in the town. The homes were declared to be unique. They were open first to regular subscribers, but if there were any beds to spare the committee sent down any who were in need of change of air, good food, and rest to restore them to health and strength. An organ recital, a concert by the City Police Band, lime-light views, &c., made up an admirable programme for an evening which was well spent and much enjoyed.

The Housing of the Poor.

It is an acknowledged fact that a large number of the poorest classes live under conditions which are absolutely unhealthy and immoral. Attention has lately been given by philanthropic citizens to the methods best adapted for the relief of those who suffer so much. It is shown that in this city the poor live in self-contained houses, in tenement houses, and in common lodging-houses, and that though much has been done by the Health Committee towards getting insanitary property condemned as unfit for habitation, or properly and adequately cleaned and limewashed, there is still a vast amount to be done. Some legal results are likely to follow the publication of some articles upon this subject reflecting upon the duties and action of the medical officer of health of the city.

April 16th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Sir John T. Brunner and the Eyesight of School-children.

SIR JOHN T. BRUNNER, Bart., M.P., is showing a practical interest in, and sympathy with, school-children suffering from strabismus. He has offered to provide schools with spectacles to alleviate this defect. The offer applies to all elementary schools, board and voluntary alike, in the Northwich parliamentary division.

The City Council and the British Congress on Tuberculosis.

The Corporation of Liverpool have voted 100 guineas towards the expenses of the British Congress on Tuberculosis which is to be held in London in July.

The Annual Report of the Head Constable.

A perusal of the annual report of the head constable reveals a decrease of crime in the city. Crimes of violence (murders, woundings, &c.) numbered only 135, being three less than the very small number in the previous year and exactly one half of the number recorded five years ago. Cases of drunkenness were slightly in excess of last year, the numbers being 4180 as against 4069 in the year 1899. The progressive decrease in cases of drunkenness is shown by the reduction of the number of convictions for that offence since the year 1895, which then reached 5505. Proceedings were taken against 3152 persons for breaches of sanitary laws. There are six fully-equipped police horse ambulances at work, four of which are stationed at the leading hospitals; the services of the ambulances were required 2056 times last year. 1673 constables hold certificates from the St. John Ambulance Association, 1030 of whom have also received medallions. The police rendered first aid in 671 emergencies; splints were applied in 155 cases, bandages in 336 cases, and tourniquets in 11 instances. Artificial respiration was resorted to in 22 cases, whilst emetics were administered 25 times. Other first aid involved 122 cases. 431 constables received special commendation from medical men for valuable first aid. The police were the means of restoring 3060 lost children to their parents. 1636 cases of insufficiently clothed children were inquired into by the police and reported upon to the Liverpool Police-aided Clothing Association. 67 lunatics were taken charge of by the police. The Order of St. John of Jerusalem in England conferred their silver medal for bravery in saving life on land upon one constable. The medal was presented by H.R.H. the Prince of Wales, Grand Prior of the Order, at Marlborough House on July 11th last. The Liverpool Shipwreck and Humane Society have conferred medals on 12 members of the force besides votes of thanks to other constables. The total number of fires attended during the year was 790, as against 882 in the previous year. The authorised strength of the brigade consists of 52 permanent firemen together with 360 auxiliary firemen (police constables), all of whom are trained men and are regularly drilled in the use of fire appliances, &c.

Appointments at the Liverpool Royal Infirmary.

The vacant post of honorary physician to the Liverpool Royal Infirmary has been filled by the appointment of Dr. T. R. Bradshaw, the senior assistant physician. During the last few years Dr. Bradshaw has published original work with regard to the condition to which he had given the name of myelopathic albumosuria, a disease which was quite unknown to the profession until he made known his observations on the subject. A keen contest is anticipated for the vacant post of honorary assistant physician to the Royal Infirmary. There are already nine candidates in the field, all of whom possess qualifications of a high order. Five of the candidates are assistant editors of the Thompson-Yates laboratories reports and have been largely engaged in pathological work.

April 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scottish Vital Statistics.

FROM the statistics for March it appears that the mortality was at the annual rate of 14·5 deaths per 1000 persons in Perth, 16·1 in Leith, 17·9 in Aberdeen, 19·9 in Greenock, 20·0 in Dundee, 20·5 in Paisley, 22·1 in Edinburgh, and 23·2 in Glasgow. Of the total 2968 deaths 1039, or 35 per cent., were of children under five years of age. Miasmatic diseases accounted for 13·3 per cent. of the total deaths. Whooping-cough has the most fatal epidemic influence; it caused no less than 6·0 of the total number of deaths. Small-pox was responsible for 74 deaths; all of these with one exception (in Paisley) occurred in Glasgow. During the previous month the deaths from small-pox numbered 57—in Glasgow 54, in Paisley two, and in Aberdeen one. Measles caused 53 deaths, diphtheria 22, scarlet fever 16, enteric fever 20, typhus fever two, and puerperal fever eight. 13 deaths were registered as due to alcohol, 12 of these being attributed to chronic alcoholism and one to delirium tremens. The deaths certified as due to phthisis pulmonalis numbered 252, or 8 per cent. of the total; other diseases of the respiratory organs (excluding whooping-cough) caused death in 613 instances—a percentage on the total deaths of 20·7 per cent. The deaths from violent causes numbered 96 and included a suicide by cut-throat and one by coal-gas poisoning. Five males and four females were aged 90 years or upwards; one of these, a widow, had reached the age of 99 years.

Glasgow Ophthalmic Institution.

The annual report of this institution, which is now conducted as a branch of the Royal Infirmary, has just been issued. It affords evidence of the increasing usefulness of the institution and would appear to show that advantage has followed union with a larger organisation. The increase in the number of patients compared with the previous year reaches 10 per cent., and the cliniques conducted by Dr. Maitland Ramsay and Dr. J. Rowan have attracted a considerable attendance of students. Indeed, it has been found necessary to extend the class-room accommodation and to make provision for students in attendance on the out-patient department. During the year the electric light has been introduced throughout the whole hospital, to the great advantage both of patients and staff. A Roentgen-ray apparatus and a large electro-magnet have also been supplied, and Dr. John Gilchrist has been appointed electrician in charge of these departments. The operating theatre has been entirely remodelled and fitted up in accordance with the requirements of modern surgery. It is to be known in future as the Overtoun operating theatre in acknowledgment of the fact that its present complete condition is due to the generosity of Lord Overtoun. The ophthalmoscopic room

has also found a generous patron who has entirely re-equipped it and who desires to remain anonymous, and the male wards have been re-floored and provided with the most approved pattern of hospital furniture at the expense of Mr. Peter Mackinnon of Ronachan and Mr. Alexander Findlay of Motherwell. The institution has certainly advanced in public and professional confidence in recent years, a result largely due to the medical staff and in some measure also to an improved system of management.

Philosophical Society of Glasgow.

At a meeting of this society on April 10th a paper was read by Dr. H. C. Marr of the Lenzie Asylum on "The Story of the Insane, with Special Reference to Glasgow." Dr. Marr, in the course of his lecture, traced the evolution of the present methods of treating insanity and gave an historical account of the several asylums existing in the neighbourhood of Glasgow, beginning with the town's hospital, founded in 1737. The separate villa system of treatment, as practised at Alt Scherbitz, was also described. In discussing the influence of alcohol as a cause of insanity Dr. Marr remarked that under the Inebriates Act relatively few of the victims of alcoholism were reached, and he urged the adoption of more effective methods to secure the desired end.

Marine Biological Station at Millport.

The authorities in charge of this institution are determined to realise as efficiently as possible the intention of its founder, the late Dr. David Robertson, and to organise a complete scheme of practical and laboratory work for the study of marine biology. On April 10th the committee received representatives from various educational bodies at the station with a view to extend a knowledge of the educational resources at their command. Dr. J. F. Gemmill, the President, gave a sketch of the new teaching arrangements, which include a course of lectures on marine zoology and botany, with practical demonstrations on Saturdays from April 27th to June 15th inclusive, the introductory lecture to be delivered by Sir John Murray, K.C.B., F.R.S. The visitors were afterwards conducted over the laboratories, tank-room, and museum by Dr. James Rankin, and then proceeded on a dredging excursion on the steam-launch *Mermaid*, recently presented to the institution. It is hoped that the new teaching arrangements will encourage the practical study of natural history among board school and other teachers, upwards of 40 of whom have already entered their names for the new classes. The science students in the University of Glasgow also find the station an admirable centre for practical work and the younger dons in the science faculty are energetically assisting in its development.

Small-pox in Glasgow.

The epidemic continues to show a decided decline. The total admissions for the week ending on April 14th numbered 33, and the patients under treatment on that date had fallen to 190. In his weekly report the medical officer submits a tabulated statement showing the proportion of revaccinated persons found in tenements from which small-pox patients were removed to hospital. The figures show that of 2730 persons over five years of age found in infected tenements 1847, or 67 per cent., had been revaccinated prior to invasion. These figures include the whole city. But when particular districts are studied it is found that the proportion of the revaccinated displays wide variations. In 26 tenements in the eastern division it was as high as 83 per cent., whilst in 12 tenements in the northern district it fell to 56 per cent.

University of Aberdeen.

The celebration of "Founders' Day" in connexion with the University was, after a lapse of several generations, revived last week, when there was a series of functions. A dinner, attended by 200 distinguished graduates, took place in Aberdeen Joint Town and County Hall on April 8th, the Very Rev. Principal Marshall Lang, D.D., presiding. A special commemoration service was held in King's College Chapel on the following morning and in the afternoon the graduation ceremony came off in the Mitchell Hall, Marischal College. Five students received the degrees of M.B., C.M. (old regulations), and 23 those of M.B., Ch.B. (new regulations). Six practitioners had the degree of M.D. conferred upon them after examination; and among others Dr. Angus Fraser, M.A., M.D. Aberd., received the honorary degree of LL.D. The same afternoon Lord Aberdeen presided over a meeting held for the furtherance of the extension scheme of the University, and a resolution was adopted whereby a fresh and vigorous movement will be inaugurated with a view to the completion of the buildings and the fuller equipment of the University. In the evening of the same day a brilliant company of about 1000 people was treated to a reception by the principal and professors in the Mitchell Hall. On April 10th the half-yearly meeting of the University General Council was held, and on the 11th there took place the annual meeting of the University Endowment Association, when encouraging reports were presented. The plans of new Greyfriars Church have now been approved by all the bodies concerned.—For the proposed memorial to the late principal, Sir W. D. Geddes, a sum of £950 has been subscribed, and it has been agreed to provide a medallion portrait in marble and a Geddes collection in the University library of works in classical literature and archæology.

Greenock Infirmary.

The following appointments have been made: Dr. J. Nairn to be a visiting physician, Dr. W. S. Cook, to be a visiting surgeon, and Dr. Eric Wilson and Dr. Edward Mackay to the medical staff of the out-patient department.

April 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

New Richmond Surgical Hospital, Dublin.

HIS Excellency the Lord Lieutenant has signified his intention of opening the new buildings of the Richmond Hospital on April 20th. They are now completely furnished and ready for the reception of patients, the number of beds at present available being 84, while the scheme allows for considerable extension in the future should the necessity arise. One of the principal features in the hospital is the operating theatre block which is probably one of the most complete of its kind in the United Kingdom. The theatre itself, apart from the various rooms devoted to the administration of anæsthetics and the sterilisation of water, instruments, &c., is a lofty chamber measuring 29 feet long by 23 feet wide. As in the new hospital in Liverpool the ventilation and warming are on the "Plenum system." The cold air is drawn through an air filter of cocoa-nut fibre, over which a spray of fresh water is continually flowing. It is warmed by passing over a calorifier heated by steam, and is then driven by means of a powerful electric fan into the theatre in any required volume and temperature. The vitiated air is extracted by means of a second fan and the whole apparatus is said to be capable of renewing the air of the theatre in the space of three minutes. As to the new wards they are all of the same size, with the exception of those for children—viz., 60 feet by 25 feet by 14 feet.

The Dublin Veterinary College.

The new Dublin Veterinary College, in which Sir Christopher Nixon as its first president takes such a strong interest, progresses favourably under the direction of Professor A. E. Mettam, D.Sc. There are now over 30 students attending its first session at the temporary premises, formerly the Hammersmith Iron Works. It is confidently expected that the new college buildings, which are to cover over an acre of ground in Pembroke Township, will be sufficiently advanced for occupation next year, and that the Veterinary College of Ireland will prove when completed to be one of the finest in the kingdom.

Royal College of Surgeons in Ireland.

At a meeting of the Fellows of the Royal College of Surgeons in Ireland, held on April 15th, Dr. R. Lane Joynt and Dr. P. W. Maxwell were elected members of the council.

North of Ireland Branch of the British Medical Association.

The spring meeting of this branch was held in the Museum, Belfast, on April 11th, the President (Professor J. W. Byers) being in the chair. The President and Dr. J. Tennant read notes of a case of Fever following Child-birth due to Infection of the Genital Tract with the Pneumococcus (Diplococcus of Fraenkel), with details as to the condition of the blood and of the Bacteriology of the lochia.—Professor T. Sinclair reported upon a case of successful Splenectomy and showed the organ removed. This is the second successful case of this nature shown to

the North of Ireland Branch, the first having been operated upon by Dr. T. S. Kirk.—Dr. John Campbell read a paper on Retro-peritoneal Hysterectomy with illustrative cases.—Dr. Mandall Byers read notes of a case of Widal's Reaction during Secondary Syphilis.—Mr. G. L. St. George showed a case of Excision of the Elbow of exceptional interest.—Dr. S. T. Beggs and Dr. W. Calwell read notes of a case of Chronic Diarrhœa due to Tuberculous Disease of the Cæcum, and Dr. A. B. Mitchell gave details of the operation performed to relieve the condition—cæcectomy.—Dr. W. Calwell read short notes of (1) a case of Dilatation of the Stomach due to Pyloric Cancer (operated on by Dr. A. B. Mitchell); (2) a case of Cancer of the Cardiac Opening of the Stomach (operated on by Dr. Robert Campbell); (3) two cases of Dilatation of the Stomach in men over 50 years of age, probably due to Pyloric or Duodenal Cicatricial Stenosis; (4) a case of Extensive Adhesion of the Stomach leading to great wasting (operated on by Dr. T. S. Kirk); and (5) a case showing sequence of events—Migraine, Sleepy Dyspepsia, Seborrhœa Capitis, and Rosacea.—Dr. Howard Sinclair showed a case of Pulmonary Tuberculosis in a man. The bacillus tuberculosis had remained absent for three months after sanatorium treatment.—Dr. R. J. Johnstone showed several Pathological Specimens from the pathological laboratory.

Presentation to Dr. E. C. Bigger.

At a meeting in the City Hall, Belfast, over which the Lord Mayor presided, Dr. E. C. Bigger, who was formerly an alderman of the Belfast City Council and physician to the Fever Hospital, was presented by his friends with an illuminated address, a silver salver, and a silver rose-bowl on his leaving Belfast to take up his new appointment as Local Government Board medical inspector.

April 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

On a Parasite which has been observed in Syphilitic Patients.

AT the meeting of the Academy of Sciences held on March 25th M. Stassano read an account of a new parasite which he had observed to exist in syphilitic patients. In examining the blood-stained serum which was withdrawn by puncture from the enlarged glands accompanying a syphilitic chancre he noticed some motile bodies, apparently flagellated infusoria, belonging to the monad group. They were round, ovoid, or pyriform and had two flagella, the one straight at one pole and another at the other pole which was much longer and tortuous. In some instances M. Stassano was able to demonstrate a nucleus. These protozoa are, as a rule, free among the cells and leucocytes of the lymphatic tissue, but sometimes they are found attached to the blood corpuscles in the gland. They therefore penetrate into the circulation, but in the early period of syphilis they are very few in number and are found almost exclusively in blood drawn from the border of the lymphatic region which is first contaminated. Little by little they invade the greater circulation and multiply very rapidly by budding. The individual protozoa so formed sometimes remain collected in masses, but at a more advanced stage of infection—i.e., when the eruption is fully out—they separate and attach themselves to the corpuscles. At the same time they grow from either end, which gives them the appearance of trypanosomata, which also, as is well known, attach themselves to the red blood corpuscles. M. Stassano has not yet been able to follow the complete evolutionary cycle of this infusorium, but he is able to state that in the patients whose cases he has studied they are only found coincidently with the appearance of the rash and that they disappear on the patient getting better, whether this amelioration be spontaneous or due to drugs. The biological conditions of this parasite explain the diminution in the number of red blood corpuscles and in the amount of hæmoglobin which is observed at every exacerbation of syphilis, as well as the extreme fragility of the red blood corpuscles which has been noticed by Murri as existing in syphilis.

Serious Occurrence due to Carelessness at a Hospital.

The error of an attendant at the Lariboisière Hospital has brought about the death of one patient and exposed others to serious risk. Dr. Duguet prescribed for a certain number of patients an enema of honey and glycerine. The attendant, however, mistook the bottles and used one containing a solution of chloride of zinc which was kept for disinfecting purposes. After the enemata had been administered six patients were seriously affected and one died on the following day after terrible suffering. The attendant was removed from her office and punished, but Dr. Duguet lays all the responsibility for the accident on the direction of the hospital, for the zinc chloride should never have been mixed up with vessels containing solutions for *tisanes*, enemata, and the like, especially as there was no distinguishing mark upon the bottle containing it. Dr. Duguet himself did not even know of its existence in the ward. Why only one patient died is explained by the following facts. The attendant, finding that her bottle of glycerine did not contain enough, intended, so as to save the trouble of going over to the dispensary, to fill it up with water. For this purpose she took the bottle containing the chloride of zinc under the impression that it contained distilled water. It did not mix with the glycerine, and consequently the patient who died was given an enema consisting of pure chloride of zinc. The others escaped owing to admixture having presumably taken place through the disturbance of the fluid caused by the giving of the first enema.

Mosquitoes in Paris.

M. Debove, in discussing this question before the Academy of Medicine, entreated his colleagues to ask the public authorities for some measures of protection against mosquitoes. These insects during the months of July and August are the source of much inconvenience in many quarters of the city. It is true that up to now they have not been proved to transmit diseases of a grave character, for the particular variety which is a carrier of malaria has not so far appeared in Paris. But those which do exist are the cause of great discomfort, especially to those who live in the well-to-do quarters near the parks or where the mosquitoes find pools and puddles of stagnant water. In these puddles the mosquitoes breed and in 1898 the Committee of Hygiene of the Seine recommended a certain number of preventive measures to be carried out such as the suppression of pools of stagnant water or at least the treating of such pools with a small quantity of petroleum. M. Laveran, whose well-known researches upon intermittent fever have made him an expert in this matter, has associated himself with M. Debove. He considers that it is very disagreeable to be obliged to use, in the heart of Paris, a mosquito net as in tropical countries, if a good night's rest is desired. All collections of stagnant water should be rigorously dealt with, however small they may be. He pointed out that even a bucket filled with water and left in a court-yard would supply a breeding-ground for a number of mosquitoes sufficient to infest a large group of houses. If buckets are carefully emptied the development of the mosquito is put an end to. In squares and public and private gardens there should be no collections of water but only running water, in which the larvæ are unable to develop. If a reservoir of some kind is indispensable it should be closely covered so that the mosquitoes cannot lay their eggs in the water, and if by chance some larvæ should appear they can easily be destroyed by pouring a thin film of petroleum on the surface of the water.

April 16th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Syphilis.

DR. HEUSS, lecturer on dermatology at the University of Zürich, has just published his views on this important subject, and though doubtless they will encounter opposition, they are of interest and worthy of due consideration. The following is a short *résumé* of his paper which appeared, in the *Correspondenzblatt für Schweizer Aerzte*, 1901, No. 6. The treatment of syphilis in the initial stage is useless, nay, even harmful. Mercurialisation never acts as a preventive against syphilis, and that for the reason that mercury is a specific only for syphilitic symptoms but not for the syphilitic poison. This bears all the more weight as the diagnosis of syphilis in the primary stage is often impossible and mistakes are not uncommon. Dr. Heuss cannot recommend excision of a primary ulcer even in the earliest stage for therapeutic purposes. He

adduces a case in which he excised a tiny wound 10 hours after syphilitic contact and yet syphilis developed in due course. Many other cases can be referred to, such as those recorded by Mauriac Gibier, Lang, Leloir, Wolf, Berkeley Hill, Havas, and others. Only in exceptional cases, such as those which are accompanied by very acute symptoms or complicated by iritis or rapidly increasing ulceration, can be recommend mercurial treatment in the first stage. Dr. Heurs is opposed to chronic intermittent treatment of syphilis for years as recommended by Fournier, as it acts detrimentally on the general health and does not prevent either recurrence or tertiary symptoms. He advocates energetic symptomatic mercurial treatment in the second stage of the disease, to be repeated if symptoms recur.

Bacillus Coli Communis in the Throat.

Dr. Joh. Seitz of Zürich has published a full description of a case of diphtheritic sore throat terminating fatally and due to infection with bacillus coli communis. The illness commenced with a rigor and a temperature of 103° F. Next day the temperature was from 103° to 104° and there was redness of the pharynx and tonsils. On the third day a white adherent thin membrane developed on one tonsil and spread to the other one, the temperature falling to 99° and the pulse rising to 102. The subjective symptoms were those of quinsy rather than of diphtheria, whereas the clinical symptoms corresponded to diphtheria. The glands were scarcely enlarged; the irritation in the throat with salivation and retching was great. The patient was very restless and the case terminated in syncope and sudden death. The bacteriological evidence pointed to bacillus coli communis as the cause of this fatal case of tonsillitis, no diphtheria bacilli developing in the numerous cultures that were made; unfortunately no post-mortem examination could be obtained. Dr. Seitz has never observed a similar case, though he has examined bacteriologically some 400 throat, nose, and ear cases. The assistant at the bacteriological laboratory of the University who makes all the examinations of presumed diphtheritic cases said that the occurrence of *abundant* bacillus coli communis was very rare in the 6000 cases which he has examined. The drains in the house of the patient, whose bedroom adjoined the water-closet, were out of repair and nauseous smells were often observed in the bedroom—a fact which throws light on the etiology of the illness.

Precautions against Plague.

Following the example of the German authorities the Swiss Federal Council has summoned to Berne such of the professors of hygiene and bacteriology and their assistants as can be spared for the purpose of attending a course of lectures and demonstrations. Hygienists of note consider that there is great probability of a spread of plague to Europe during the ensuing summer, and are of opinion that the European Governments should do all in their power to promote prompt diagnosis of the first cases of the disease in order that measures of isolation may be adopted.

April 13th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Emergency Hospital at the Buffalo Exposition.

A HOSPITAL has been erected in the grounds of the Exposition which is to be opened in Buffalo in May. The building has been constructed for the purpose of treating any person who may be injured or taken ill while at the Exhibition, and it is besides a picturesque feature in itself and is in harmony with the general plan of architecture followed by the designers of the Exposition. It is after the style of an adobe mission-house; it has a frontage of 90 feet and the main wing has a depth of 38 feet, with a height of but one storey except in the centre where is placed a square tower with a rounded top. A rear wing one storey high runs back from the centre portion to a distance of 56 feet with a width of 32 feet. The first floor front contains in the extreme western wing two male wards with seven cots each. The eastern wing contains a female ward large enough to hold a dozen cots. The upper storey is intended for the use of the resident physician and attendants. The building throughout is equipped with the latest scientific and sanitary appliances and water, gas, and electricity are carried to every part of the building. Dr. Roswell Park is the director.

Anti-spitting Movement in New York City.

The Public Health Department of New York City have now for several years issued regulations as to promiscuous expectoration. The fact is generally recognised that the habit is not only extremely filthy and disgusting but that under certain circumstances it may be attended with serious danger to the health of the entire community. The aforesaid regulations apply to public buildings and conveyances, and the infringement thereof renders the offender liable to a heavy fine or a term of imprisonment or both. Latterly small heed has been paid to these orders, and owing to the law not having been enforced against those breaking them they have fallen into disrepute. The consequence of this laxness on the part of the authorities has resulted in a recrudescence of the spitting habit in public places, and especially in the street cars, to the great detriment and annoyance of all decent persons. Now, however, an official crusade is being waged against individuals who, careless of the comfort and health of others, deposit their sputum upon the floors of public buildings and vehicles. By the order of the President of the Board of Health a number of policemen from the sanitary squad, attired in plain clothes, are detailed to ride up and down Greater New York in the elevated trains and street-cars for the purpose of detecting and taking into custody any person of whatever age or sex found expectorating in such conveyances. On the first day when policemen were detached for this duty no less than 19 arrests were made, all of those arrested when brought before a magistrate being heavily fined. The President of the New York City Board of Health declares it to be his intention to keep the entire sanitary squad at work in enforcing the expectoration section of the sanitary code until the people of New York become definitely convinced that sanitary laws were made to be enforced.

Plague in San Francisco.

At last the question as to whether plague has been, and is still, present in San Francisco appears to be decided once and for all. For a long time—in fact, from the time the disease first broke out in San Francisco (as told in a former letter)—there has been friction between the United States Marine Hospital Service officials and the State and municipal authorities. The Governor of California has consistently denied that the findings of Dr. Kinyoun and coadjutors were correct with regard to their assertions that plague was present in the Chinese quarter of San Francisco and he has made use of his position to place obstacles in the way of a thorough cleansing and disinfection of that unsavoury quarter. Unfortunately, too, his contentions have been supported by one of the principal medical journals of the State. Now, however, an explicit statement setting forth the exact conditions of the plague situation in San Francisco has been prepared for the official public health bulletin in which it is shown that there have been 10 deaths from bubonic plague in San Francisco between Jan. 1st and March 15th. The statement says that of the cases reported in February six cases and deaths between Feb. 5th and 12th were reported by the special commissioner appointed by the Secretary of the Treasury to examine into the conditions regarding the plague in San Francisco. This commission consisted of Professor Simon Flexner of the University of Pennsylvania (chairman), Professor F. G. Novy of the University of Michigan, and Professor L. S. Barker of the University of Chicago (recorder). Plague has been reported in San Francisco officially in the public health reports since March 6th, 1900, 32 cases (all fatal) having been reported and published in the previous minutes of the public health reports, and the facts were reported in the annual report to Congress of the Secretary of the Treasury dated Dec. 4th, 1900. On the return of this committee to San Francisco Surgeon White wired on March 22nd that they had agreed to raise funds for immediate work to disinfect all infected houses, to provide hospitals for suspects, a detention house, and a morgue, and for the general disinfection of Chinatown, with betterment of light-space and air-space. Subsequent telegrams show that the work is being organised. The disease has been confined almost exclusively to the Chinese population, and an examination of the mortuary records of the latter for the past four years shows that there has been no time during that period when it has increased to such an extent as in itself to cause alarm. It is well that the National Government has interfered in the matter, and it seems somewhat of a mistake that this step was not taken sooner. If the

extirpation of plague in San Francisco means the purification of Chinatown the disease will after all have proved "a blessing in disguise." With the drastic measures recommended from Washington it may be anticipated with confidence that plague will soon be driven out of San Francisco.

April 9th.

Obituary.

GIULIO BIZZOZERO.

FEW men within the comparatively brief term of 55 years have done sounder or more diversified work than Dr. Giulio Bizzozero, professor of general pathology in the University of Turin. Born at Varese in Lombardy on March 20th, 1846, he distinguished himself in classical study at Milan before matriculating at the University of Pavia. There he crowned a brilliant curriculum by taking the "summi in medicinâ honores" in 1866 and was just entering the path of clinical instruction when the outbreak of hostilities with Austria called him, like many other young graduates, to fight for his country under Garibaldi. A few weeks, however, sufficed to bring Austria to terms; Venice was ceded to the House of Savoy and the summer of the same year saw young Bizzozero, bronzed, if not flushed, from the successful campaign, once more absorbed in medical study—filling, indeed, at the age of 21 years the chair of general pathology just vacated by the transfer of Paolo Mantegazza to Florence. The young professor was effective and popular from the first, but he had too high a standard of proficiency to rest satisfied with what Italy could then impart to him. So the close of the session found him at Berlin working in the laboratory of Virchow, working, moreover, with an intelligence and an energy that drew from his great teacher a compliment he never forgot: "Bizzozero, il mio migliore allievo" (Bizzozero, my best pupil). And thus between Pavia and Berlin he continued to perfect himself, till in 1873, when but 27 years of age, he obtained by competitive examination among a host of formidable candidates the professorship of general pathology in the University of Turin, where, with ampler resources and more stimulating opportunities, he began the special studies which have left physiology and pathology so much the richer.

The mere titles of his monographs read before the Turinese Academy of Medicine and afterwards communicated to the sister academies or associations of the world will suffice to show the range and minuteness of his work: "Comparative Studies on the Nemaspermi and the Vibratile Cilia," "On the Automotor Corpuscles," "On Some Alterations in the Lymphatics of the Brain and Pia Mater," "On the Parenchyma of the Pineal Gland," "On the Relations of Tuberculosis of the Dura Mater," "On the Lymphatics and on the Structure of the Serous Tissues in the Human Subject," "On the Transfusion of Blood into the Peritoneum," "On the Production of the Red Globules in the Various Classes of the Vertebrates," and "On the Microphytes of the Normal Epidermis in Man." Not one of these memoirs is less than a model of painstaking, sure-footed induction, while the knowledge so laboriously and honestly acquired he had the art of communicating to young minds with an attractive power and an impressiveness which rewarded the attention he had so skilfully economised. His class-room and laboratory by this time were thronged with pupils from every part of Italy and not a few from abroad—indeed, scarcely a medical school in the Peninsula and islands is without one or more of his assistants on its professorial staff. Be it enough to mention Golgi of Pavia, Manfredi of Pisa, Bassini of Padua, and Bozzolo and Foà of Turin. According to one of these he had, in addition to his rare inductive power, "a lucidity of thought and of expression which reminded his hearers of the English orator."

His constant, his indefatigable work with the microscope had of late years begun to tell on his eyesight, and by the advice, nay, the gentle constraint, of his colleagues he abandoned its use, only, however, to throw himself with fresh energy into a field on which he has left a salutary and enduring mark—State Medicine. "As Beethoven," says a Piedmontese colleague, "after he became deaf still continued to compose, so Bizzozero, with eyes too weak for laboratory work, did not cease to enrich the healing art with masterly contributions." His ardent wish was to help on the regeneration of young Italy, first physically, then morally, inspired as he was by D'Azeglio's saying: "We have made Italy; we have now to make Italians." With this object he laboured hard with Celli and others to limit and finally to stamp out malaria, to antagonise and ultimately to prevent infectious disease, and, as provisional or collateral expedients, to cheapen pure quinine and to regulate the manufacture of serums. In not a few of these undertakings he encountered opposition and incurred controversy, particularly over that "quæstio" so needlessly "vexata"—vaccination. From the first a convinced and enthusiastic promoter of the Jennerian prophylactic, it is mainly due to him that Italy has not fallen a victim to the mischievous propaganda which of all places in the world has its starting-point in England. But his admirable inductive power, aided by a dialectic skill and a lucidity of exposition which his antagonists could not countervail, always left him master of the field. His last work, addressed partly *ad populum*, partly *ad clerum*, was on the etiology and prevention of cancer, now more frequently met with everywhere, Italy included; and he had barely given it to the press when he was struck down with the pneumonia which ever since the "new influenza epidemic" has found, especially in the Italian subject, an easier prey. By the eighth day of its course his resisting power was obviously at an end, and in spite of all loyal old pupils like Golgi, Foà, Bozzolo, and others gathered round his bed could do he passed away at 8.45 P.M. on April 8th. *Consummavit cursum, fidem servavit;* and a public funeral of exceptional magnitude and solemnity has just attested the grief of his colleagues and compatriots on account of the loss of all that is buried in the grave of Giulio Bizzozero.

IVOR AJAX LEWIS, M.R.C.S. ENG., L.R.C.P. EDIN., J.P.

MR. IVOR A. LEWIS of Cymmer, Porth, died suddenly in the Glamorganshire County Club at Cardiff on April 8th. He had visited the town for the purpose of playing golf at Porthcawl, and returning to the club had not been long at dinner when he was seized with pain and shortly afterwards expired. Dr. Herbert Vachell, who made a post-mortem examination, stated at the inquest, held on April 9th, that death resulted from failure of the heart's action brought on by distension and congestion of the stomach after eating mussel soup, and a verdict was returned to that effect. Some other diners who partook of the soup were in no way affected by it. Mr. Lewis was born at Llantrisant in 1848 and was educated at Bristol Grammar School. He received his medical education at Guy's Hospital and took the qualifications of M.R.C.S. Eng. and L.R.C.P. Edin. in 1875. He commenced practice in Llantrisant and later removed to Abergorky, and 25 years ago he was appointed medical officer to the Cymmer Collieries. Mr. Lewis was also surgeon to the National Collieries at Wattstown. He was awarded in 1877 the bronze medal of the British Medical Association, and was a Justice of the Peace for the county of Glamorgan. Mr. Lewis excelled in many branches of sport. He was an excellent shot, had played cricket for his county, was a formidable opponent at billiards, tennis, and rackets, and was an enthusiastic golf player. He leaves a widow and a family of five sons and six daughters, for whom much sympathy is felt.

Medical News.

UNIVERSITY OF BIRMINGHAM.—At the First Examination for the degree of Bachelor of Medicine and Bachelor of Surgery, held in April, the following candidates passed in the subjects indicated:—

Elementary Biology (Part I.)—Class I.: Robert Wallace Aitken, William Cook, Alfred Ernest Remmett Weaver, and Frederick Wilkinson. *Class II.:* Reginald Hudson Astbury, John Staines Austin, Edwin Lancelot Bunting, Herbert Elwell, Helen Gertrude Greener, Edith Dora Grove, Cuthbert Keay Gettings, Harold Salter, Leonard Leigh Hadley, Richard John James Hawkes, Lionel Chattock Hayes, William Claude Horton, William Cuthbert Houghton, Ernest Henry Kenderdine, Leonard George Joseph Mackey, Vivian Gray Maitland, Henry Percy Pickerill, Horace John D'Arcy Gerrard Price, George Rollason, Norman John Lancelot Rollason, Henry Philip Thomason, Spencer Graham Walker, Bernard Joseph Ward, John Wells, and Edmund Stanley Whitcombe.

Chemistry and Physics (Part I).—Class I.: William Cook, Cuthbert

Keay Gettings, Richard John James Hawkes, Thomas Holmes Ravenhill, Henry Philip Thomason, Alfred Ernest Remmett Weaver, and Frederick Wilkinson. *Class II.*: Herbert Elwell, Harold Salter Gettings, Joseph Richard Ewart Heseltine, Leonard George Joseph Mackey, Ernest Osborne, and Bernard Joseph Ward.

UNIVERSITY OF DURHAM.—At the first examination for the degree of Bachelor in Medicine held in April the following candidates satisfied the examiners:—

OLD REGULATIONS.

1. *Chemistry, with Chemical Physics.*—Thomas Hill Bailey, L.S.A., King's College Hospital, and John George Hugh Lane, M.R.C.S., L.R.C.P., Guy's Hospital.

NEW REGULATIONS.

1. *Elementary Anatomy and Biology, Chemistry, and Physics.*—Dudley Thomas Birt, College of Medicine, Newcastle-upon-Tyne; John Arthur Bell, St. Bartholomew's Hospital; and William Henry Hugh Croudace, Robert Blackett Reed, Andrew Banks Raffle, Robert Rutherford, and Robert Joseph Willan, College of Medicine, Newcastle-upon-Tyne.
2. *Elementary Anatomy and Biology.*—Herbert Christal and John Bowman Cooke, College of Medicine, Newcastle-upon-Tyne; Saville James Fielding, St. Thomas's Hospital; James Glenny Gibb, St. Bartholomew's Hospital; Arthur Henry Hogg, College of Medicine, Newcastle-upon-Tyne; William Edward Hopkins, St. Mungo's College, Glasgow; Francis Henry Moxon, Ernest Lacy Markham, and William Tait Sewell, College of Medicine, Newcastle-upon-Tyne; Arthur John Turner, London Hospital; and Edward Tate, College of Medicine, Newcastle-upon-Tyne.
3. *Chemistry and Physics.*—Frederick William Kemp, Charles Duncan Relton, and James Burrell Williamson, College of Medicine, Newcastle-upon-Tyne; and Ernest Young, St. Mary's Hospital.
4. *Elementary Anatomy.*—Sophia Bangham Jackson, University College, Cardiff, and John Benjamin Thomas, St. Mary's Hospital and Cook's School of Anatomy.

UNIVERSITY OF ABERDEEN.—The following degrees and diploma have been conferred:—

Honorary Degree of Doctor of Laws (LL.D.).—Angus Fraser, M.A., M.D., Aberdeen.

Degree of Doctor of Medicine (M.D.).—George Keith Gifford, M.B., C.M., Brierley Hill, Staffs.; *Andrew Davidson Kelly, M.B., C.M., Dudley, Northumberland; *Thomas W. Lumsden, M.B., Ch.B., London [New regulations]; Robert George McGowan, M.B., C.M., Cheetham Hill, Manchester; James Pirie, M.B., C.M., Harbury, Leamington Spa; and David Skinner, M.B., C.M., Beechworth, Victoria, Australia [Thesis for M.B. under old regulations].

* Thesis considered worthy of commendation.

Degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.) (Old Ordinances).—Tarcisius Bromilow, Lostock Park, Bolton, Lancashire; Daniel Albert Robert Farquharson, Ballater, Aberdeenshire; Walter James Flett, Findochty, Banffshire; and George Ernest Hugh Le Fanu, Aberdeen.

Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) (New Ordinances).—†Robert Aird, M.A., Petercuiter, Aberdeenshire (with first-class honours); William Anderson, M.A., Aberdeen; William Cameron, Dyce, Aberdeenshire; †Alexander Whyte Cassie, M.A., Hopeman, Elgin (with second-class honours); James Wilson Clyne, Aberdeen; Robert Cranna, Essie, St. Fergus, Aberdeenshire; James Gellie Davidson, London; John Hay Duguid, Aberdeen; Charles Forbes, Aberdeen; James Gilchrist, M.A., Wells, Rothienorman, Aberdeenshire; Alexander Clark Glashan, Dyce, Aberdeenshire; Albert Germain Gray, Carthagena, Spain; John Joseph Johnson, Aberdeen; James Kerr, Aberdeen; Dudley MacDonald Mackenzie, Ealing; Norman Walter Mackworth, Bucksburn, Aberdeenshire; William M'Quiban, Aberdeen; William George Maydon, Aberdeen; John Alexander Mearns, Aberdeen; William Duke Gorges Mulloy, Guernsey; Henry Watson Smith, Aberdeen; Eric Maclean Thomson, M.A., Burnside, Port Gordon; and Alexander William Overbeck Wright, Aberdeen.

† Passed final examination with distinction.

Degree of Bachelor of Science (B.Sc.).—James Addison, M.A., Whitehills (with special distinction in mathematics and natural philosophy); Charles Todd Andrew, Hamilton; Charles Lyall Grant, M.A., Aberdeen (with special distinction in botany); Francis William Gray, M.A., Aberdeen; Arthur H. Mackenzie, Inverness; George Stewart, M.A., Aberdeen; Alexander S. Third, M.A., Aberdeen (with special distinction in chemistry); and Henry Alleyne Varty, Penrith.

Diploma in Public Health.—Norman Davidson, M.B. (Aberd.), Aberdeen; John Charles Galloway, M.A., M.B. (Aberd.), Oyne, Aberdeenshire; Alexander Ledingham, M.A., M.B. (Aberd.), Boyndie, Banff; Charles Murray, M.A., M.B. (Aberd.), Aberdeen; ‡James Ritchie, M.D. (Aberd.), Aberdeen; Alexander MacGregor Rose, M.B. (Aberd.), Aberdeen; Henry Sinclair, M.B. (Aberd.), Cults, Aberdeen; and ‡Alexander Brown Walker, M.B. (Aberd.), Aberdeen.

‡ With credit.

ARTIFICIALLY COLOURED SUGAR.—The public analyst for the county of Gloucester reports that during the quarter ended March last 121 samples of food, &c., were analysed of which 10 were adulterated. Six samples of sugar sold as Demerara sugar consisted of white sugar crystals coloured with a coal-tar dye.

AT the meeting of the Exeter City Council held on April 10th it was decided that Mr. C. E. W. Bell, the police surgeon, should in future receive 10*s.* 6*d.* per man with 3*s.* 6*d.* for the examination of each recruit instead of an annual salary of £30. The increase of salary was granted in consequence of the enlarged radius in which members of the police force now reside.

THE Corporation of London has contributed 100 guineas towards the purposes of the forthcoming British Congress on Tuberculosis in July next.

ON April 16th Mr. John S. Crone, L.R.C.P. Irel., J.P., of Kensal-rise, was re-elected chairman of the Willesden District Council for the ensuing year.

MEDICAL MAGISTRATE.—Mr. Justin McC. McCarthy, M.D. Durh., of St. George's, Salop, has been appointed a Justice of the Peace for the county of Salop.

VAGRANCY IN DORSETSHIRE.—Captain Granville, the chief constable of Dorset, has reported that there were 13,133 admissions to casual wards during 1900—a number fewer by 2617 than in 1899. This was a decrease of 27 per cent.

THE TENBY MEDICAL OFFICER OF HEALTH.—Mr. John Griffith Lock, owing to ill health, recently resigned the position of medical officer of health of the borough of Tenby. He had been annually re-elected since 1872 and was the oldest medical officer of health in Wales and, with possibly one exception, in the United Kingdom.

LITERARY INTELLIGENCE.—Messrs. J. & A. Churchill are issuing this week the sixth edition of Dr. Hale White's Materia Medica. The feature of this edition is that it contains the Materia Medica, Pharmacy, Pharmacology, and Therapeutics of the Drugs in the Indian and Colonial Addendum (1900) to the British Pharmacopœia, 1898.

THE POST OF PUBLIC ANALYST FOR THE CITY OF LONDON.—The Society of Public Analysts has laid stress on the importance of this forthcoming appointment by a letter addressed to the Corporation expressing regret at the terms offered by the Corporation, which, in the opinion of the society, are most inadequate, particularly with respect to analyses of water. The society also takes exception to the encouragement given to a system of competition among professional chemists without regard to a suitable equivalent for their services.

BOOKS, ETC., RECEIVED.

BAILLIÈRE ET FILS, Paris.
Royat: Indications Thérapeutiques méthodiquement classées. By Dr. A. Bouchinet. Price 2 francs.

BLACK, ADAM AND CHARLES, London.
Jerusalem: a Practical Guide to Jerusalem and its Environs. By E. A. Reynolds-Ball, B.A., F.R.G.S. Price 2*s.* 6*d.*

CARRÉ ET NAUD, Rue Racine, Paris.
La Grossesse: Étude sur sa Durée et sur ses Variations. By Dr. L Bouchacourt. Price not stated.

CLAY AND SONS, Ave Maria-lane, London.
Science and Mediæval Thought. By T. Clifford Allbutt, M.A., M.D., &c. Price 2*s.* 6*d.*

GREEN AND SONS, Edinburgh.
Encyclopædia Medica. Vol. vii.: Liver to Menopause. Price not stated.

HIRSCHWALD, AUGUST, Unter den Linden, Berlin.
Die Herzkrankheiten bei Arteriosclerose. By Professor Dr. S. von Basch. Price 9 marks.

HUBBS, G. C., Waterloo, Iowa, U.S.A.
Transactions of the Iowa State Medical Society. Vol. xviii. Price not stated.

KEENER AND CO., Wabash-avenue, Chicago.
Human Placentation: An Account of the Changes in the Uterine Mucosa and in the Attached Fœtal Structures during Pregnancy. By J. Clarence Webster, B.A., M.D., &c. Price 3.75 dols.

KEGAN PAUL AND CO., Charing Cross-road, London.
Arsenic. By Professor J. Alfred Wanklyn, M.R.C.S. Price 2*s.* 6*d.*

KIMPTON, HENRY, Furnival-street, London.
Nervous and Mental Diseases. By Charles S. Potts, M.D. Price 7*s.* 6*d.*
Histology and Pathology. By John Benjamin Nichols, M.D., and Frank Palmer Vale, M.D. Price 7*s.* 6*d.*
Obstetrics. By David James Evans, M.D. Price 7*s.* 6*d.*
Eye, Ear, Nose, and Throat. By William Lincoln Ballenger, M.D., and A. G. Wippern, M.D. Price 10*s.*
Electro-hæmostasis in Operative Surgery. By Alexander J. C. Skene, M.D., LL.D. Price 10*s.* 6*d.*
Dental Metallurgy. By Charles J. Reig M.D., D.D.S., and Augustus Koenig, B.S., M.D. Price 7*s.* 6*d.*

CLAVE, JOHN, Bodley Head, London.
The Column: a Novel. By Charles Marriott. Price 6s.
The Chronicle of a Cornish Garden. By Harry Roberts. Price 5s.

LIBRAIRIE DE PARIS, Rue Jacob, Paris.
Comment la Route crée le Type Social. By Edmond Demolins. Price 3 francs 50 cents.

MACMILLAN AND CO., London.
Appendicitis: its Pathology and Surgery. By Charles Barrett Lockwood, F.R.C.S. Price 10s.

MALOINE LIBRAIRIE, Rue de l'Ecole de Médecine, Paris.
Annuaire des Eaux Minérales, Stations Climatiques et Sanatoria de la France et de l'Étranger. Price 1 franc 50 cents.

METHUEN AND CO., Essex-street, Strand, London.
Diseases of the Heart. By E. H. Cilbeck, B.A., M.D., &c. Price 12s.

MURRAY, JOHN, Albemarle-street, London.
The Natives of South Africa: their Economic and Social Condition. Edited by the South African Native Races Committee. Price 12s.

PETTIBONE AND CO., Chicago.
Transactions of the American Dermatological Association at the Twenty-fourth Annual Meeting held in Washington, D.C., 1900. Price not stated.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.
Appendix XIV. to the Second Edition of the Descriptive Catalogue of the Pathological Specimens contained in the Museum. By Samuel G. Shattock, Pathological Curator. Price not stated.

SMITH, ELDER, AND CO., Waterloo-place, London.
Rodney Stone. By A. Conan Doyle. Price 6s.

TREAT AND CO., West Twenty-third-street, New York.
Pulmonary Consumption, Pneumonia, and Allied Diseases of the Lungs. By Thomas J. Mays, A.M., M.D. Price 3 dols.

WELLBY, PHILIP, Henrietta-street, Covent-garden, London.
The Colour Cure: a Popular Exposition of the Use of Colour in the Treatment of Disease. By A. Osborne Eaves. Price 1s. 6d.

WILSON, EFFINGHAM, Royal Exchange, London.
How to Read the Money Article. By Charles Duguid. Second edition. Price 2s. 6d.

WRIGHT AND CO., Bristol.
Our Baby: for Mothers and Nurses. By Mrs. Langton Hewer. Seventh edition. Price 1s. 6d.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BENSON, P. L., M.D. Dubl., D.P.H. Cantab., has been re-appointed Medical Officer of Health for the Rural District of Buckingham.

BOND, FRANCIS THOMAS, M.D. Lond., M.R.C.S., F.R.S. Edin., has been re-appointed Medical Officer of Health for the Chipping Sodbury (Gloucestershire) Rural District Council.

BOTHWELL, G. GRANVILLE, M.B., C.M. Aberd., has been appointed Senior Resident Surgeon to the Memorial Hospital, Bulawayo, Rhodesia, vice J. E. Clayton, resigned.

BRADSHAW, T. R., M.D., M.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to the Liverpool Royal Infirmary.

BREWERTON, ELMORE, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Curator of the Museum and Pathologist to the Royal Westminster Ophthalmic Hospital.

BROWN, J. PERCIVAL, M.B., Ch.B. Vict., has been appointed House Surgeon to the Hulme Dispensary, Manchester.

BUTCHER, H. O. F., M.R.C.S., has been re-appointed Medical Officer, No. 2 District, Ware Union.

BYWATER, H. H., M.B., Ch.B. Vict., has been appointed Senior House Surgeon, Royal Infirmary, Preston.

CUSSE, ERNEST, M.R.C.S., has been appointed District Medical Officer, Stockbridge Union, vice J. Clapperton.

EATON, JAMES, M.R.C.S., has been re-appointed Medical Officer of Health by the Grantham Rural District Council.

FOSTER, M.B., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed Medical Officer, No. 1 District, Ware Union.

FULLER, ALFRED LEONARD, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer for Bath Eastern Dispensary, vice W. H. Cooke, resigned.

GARDINER, A., M.B., C.M. Aberd., has been appointed Certifying Surgeon under the Factory Acts for the King's Lynn District.

GREENWOOD, A., M.D. Vict., D.P.H., has been re-appointed Medical Officer of Health for the Borough of Crewe.

HINGSTON, A. A., M.B., C.M. Aberd., has been appointed Civil Surgeon attached to the Army Medical Corps in South Africa.

JONES, F. F., M.R.C.S., D.P.H., has been appointed Certifying Surgeon under the Factory Acts for the Llanfyllin District of the County of Montgomery.

MACDONALD, F. B., M.B., C.M. Edin., has been appointed Medical Officer, Royal Infirmary, Preston.

NUTHALL, ALEX. W., F.R.C.S., has been appointed Resident Surgical Officer to the General Hospital, Birmingham.

OLIVEY, J. M. A., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Poole Union, vice H. W. Scratchley, deceased.

PALLETT, T. E., M.D. Brux., has been appointed District Medical Officer, Halstead Union, vice J. Taylor, resigned.

PIERCY, R. W. C., M.B., B.Sc. Lond., D.P.H. Cantab., has been appointed Medical Officer by the Guildford Rural District Council.

THOMAS, ROBERT RUSSELL, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to the Cardiff Infirmary.

TUXFORD, A., M.D. Edin., has been re-appointed Medical Officer by the Boston Rural District Council.

WELCH, CHARLES H., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Bath Eastern Dispensary.

WHITTINGTON, T. P., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer by the Neath Rural District Council.

WILLIAMS, W. J., M.D. Edin., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer, North Riding Infirmary.

WILLIAMSON, J., M.B., C.M. Edin., has been appointed Medical Officer of Health, Surrey United Sanitary District, vice E. L. Jacob.

WORGER, R. G., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Frome Union, vice T. H. Worger, resigned.

YEOMAN, J. B., M.D. Edin., has been appointed Medical Officer by the Wirrall Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, Gloucester.—Junior Assistant Medical Officer. Salary £150 per annum (rising to £170 after the first year) with board, &c.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, single. Salary £100 per annum, with board and residence.

BRENTFORD UNION.—Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer of the Workhouse and Schools at Isleworth. Salary £100 per annum, with furnished apartments in the Infirmary, rations, washing, &c. Candidates must be single.

BRISTOL GENERAL HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, &c.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, Chelsea, S.W.—Resident Medical Officer and Secretary. Salary £95 per annum, with furnished rooms and allowances.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £110 per year, with board, apartments, and laundress.

CHORLTON-UPON-MEDLOCK DISPENSARY, Manchester.—Resident House Surgeon, unmarried. Salary £130 per annum, with furnished rooms and attendance.

CITY OF LIVERPOOL INFECTIOUS DISEASES HOSPITALS.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, lodging, and washing.

CITY OF SHEFFIELD HOSPITALS.—Resident Medical Superintendent. Salary £250 per annum, with board, lodging, and attendance.

CORPORATION OF THE CITY OF CAPE TOWN.—Medical Officer of Health. Commencing salary £800 per annum, with additional fees in regard to small-pox, possibly aggregating about £200 per annum.

COSFORD UNION, Suffolk.—Medical Officer and Public Vaccinator. Salary £52 2s. per annum, with fees.

COUNTY ASYLUM, Prestwich, Manchester.—Assistant Medical Officer, unmarried. Salary £150 per annum, increasing to £250, with board, apartments, and washing.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer for about four months. Salary £4 4s. per week, with furnished apartments and board.

COUNTY BOROUGH OF SOUTH SHIELDS.—Medical Officer of Health. The salary will commence at £300 per annum.

COUNTY OF LANARK, DISTRICT OF THE MIDDLE WARD ISOLATION HOSPITAL.—Resident Physician. Salary £140 per annum, with board, &c.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Surgeon.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, Bartlett's-buildings, Holborn-circus, E.C.—Resident Medical Officer. Salary £120 per annum, with residence, attendance, coals, and gas, and permission to take resident pupils.

GENERAL INFIRMARY, Leeds.—House Physician for six months. Board, lodging, and washing provided. Also two House Surgeons for one year.

HOMES OF THE NATIONAL ASSOCIATION FOR PROMOTING THE WELFARE OF THE FEEBLE-MINDED, 53, Victoria-street, London, W.—Honorary Dentist.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £75 per annum, with residence, board, and washing.

ISLE OF WIGHT COUNTY ASYLUM, near Newport, I.W.—Assistant Medical Officer. Salary £100, rising £10 yearly to £150, with board, lodging, washing, &c.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon, unmarried. Salary £75 per annum, with board, lodging, and washing.

LIVERPOOL STANLEY HOSPITAL.—House Surgeon. Salary £100. Also Third House Surgeon, £70, with residence, board, &c.

LONDON HOSPITAL, Whitechapel-road, E.—Obstetric Registrar.

LONDON TEMPERANCE HOSPITAL.—Assistant Surgeon. Honorarium 50 guineas a year.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer, unmarried. Salary £150 per annum, with board and residence.

METROPOLITAN BOROUGH OF LEWISHAM.—Medical Officer of Health and Public Analyst. Salary £800 per annum.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer. Salary £80 per annum, with board, attendance, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Bloomsbury.—Senior and Junior House Physicians. Salary respectively £100 and £50 per annum, with board and apartments.

NORTHAMPTON GENERAL INFIRMARY.—Assistant Honorary Physician.
NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Senior Resident Medical Officer. Honorarium, £100.
NORTH RIDING INFIRMARY, Middlesbrough-on-Tees.—Assistant House Surgeon. Salary £75 a year, with lodging, board, and washing.
PARISHES OF ST. GILES AND BLOOMSBURY.—District Medical Officer and Public Vaccinator, open only to medical men resident within these parishes. Salary of District Medical Officer £50 per annum; Public Vaccinator, fees in accordance with the scale approved of by the Local Government Board.
ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.
ROYAL CORNWALL INFIRMARY.—House Surgeon (unmarried). Salary for first year £85, increasing by £10 a year, with board (excluding stimulants) and apartments.
ROYAL INFIRMARY, Sheffield.—Vacancy on Honorary Surgical Staff.
ROYAL ORTHOPÆDIC HOSPITAL, 277, Oxford-street, and 15, Hanover-square, W. C.—Resident House Surgeon and Registrar, unmarried. Salary £130 per annum, with partial board.
ROYAL SEA BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £60 per annum, with board and residence.
ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Salary £50, with board, residence, and laundry.
RURAL DISTRICT OF CHERTSEY AND URBAN DISTRICTS OF CHERTSEY, WALTON-UPON-THAMES, AND WEYBRIDGE.—Medical Officer of Health. Salary £500 per annum.
SOMERSET HOSPITAL, Cape Town.—Assistant Resident Surgeon. Salary £200 per annum, quarters and rations, and free passage.
SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon (unmarried), for six months. Honorarium at the rate of £60 per annum, with residence, board, and washing.
ST. MARY'S HOSPITAL, Quay-street, Manchester.—Two Medical Officers, Senior and Junior. Salary £70 and £65 respectively, with board and residence.
STOCKPORT INFIRMARY.—House Surgeon. Salary £100, with residence, board, and washing. Also Junior Assistant House Surgeon for six months. Salary at the rate of £24 per annum, with board, washing, and residence.
SUNDERLAND INFIRMARY.—House Physician and House Surgeon. Salary £100, with board and residence, increasing by £15 annually for three years.
THE CHIEF INSPECTOR OF FACTORIES gives notice of a Vacancy for a Certifying Surgeon under the Factory Acts at Tralee, in the County of Kerry.
WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon. Salary £75 per annum, with board, residence, &c.
WREXHAM INFIRMARY.—House Surgeon. Salary £100 per annum, with board and washing.

Births, Marriages, and Deaths.

BIRTHS.

POWELL.—On April 12th, at Manor Lodge, Upper Clapton, the wife of Herbert E. Powell, M.R.C.S., of a son.
RUSSELL.—On April 16th, at Osman House, Fortis-green, London, the wife of John Dill Russell, F.R.C.S. Eng., of a son.
SCHOFIELD.—On April 17th, at 1, Gunterstone-road, West Kensington, W., the wife of S. Robert Schofield, M.B. Lond., of a son.

MARRIAGES.

DUNCAN—STEPHENSON.—At St. Mary Abbott's, Kensington, on the 11th inst., by the Rev. John Duncan, vicar of Calne, and Canon of Salisbury, uncle of the bridegroom, James Matthews Duncan, M.A., M.B., Cn.B., third son of the late Charles Duncan, Esq., advocate in Aberdeen, to Muriel, second daughter of George Skelton Stephenson, Esq., M.D., the Manor House, Grimsby.
GIRDLESTONE—CAPE.—On the 10th inst., at St. Peter's, Bournemouth, Howard Edward, eldest son of James Girdlestone of Brixton, S.W., to Edith Mary, third daughter of the late George Augustus Cape of Tonbridge Wells.
MANNING—FLEMING.—On April 11th, at the parish church, Combe Martin, North Devon, by the Rev. H. W. Toms, M.A., rector, and the Rev. F. W. Toms, M.A., N. S. Manning, F.R.C.S., L.R.C.P., Combe Martin, to Winifred Alice, only surviving daughter of Veterinary Colonel G. Fleming, C.B., LL.D., F.R.C.V.S., Principal Veterinary Surgeon of the Army (retired), Higher Leigh, Combe Martin.
NEWMAN—YOUNG.—On March 21st, at Abbottabad, Punjaub, India, Captain Ernest Newman, M.D., I.M.S., son of W. Newman, M.D., of Stamford, to Lilian, daughter of Colonel Young, I.M.S.
PERMEWAN—MUSPRATT.—On Wednesday, April 17th, at the parish church, Sefton, Lancashire, by the Rev. R. F. G. Smithwick, M.A., vicar of Seaforth, assisted by the Rev. Canon Armour, D.D., William Permewan, M.D., F.R.C.S., of 7, Rodney-street, Liverpool, second son of Dr. Permewan, Redruth, Cornwall, to Stella, youngest daughter of Edmund Knowles Muspratt, J.P., of Seaforth Hall, near Liverpool.
WYLEY—METCALFE.—On April 10th, at St. Matthew's Church, Leyburn, by the Rev. E. Orde-Powlett, rector of Wensley, assisted by the Rev. T. Urmson, rector of Willington, and the Rev. John Hawthorn, curate of Leyburn, the Rev. William K. Wyley, vicar of Hellon Bumpstead, Essex, eldest son of W. J. Wyley of High Onn, Stafford, to Annie Margaret, third daughter of Richard Metcalfe, M.D., of Eastfield Lodge, Leyburn.

DEATH.

FORBES.—On April 5th, at Nice, William Forbes, M.R.C.S., late of Gippsland, Victoria, aged 69 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"THE CHURCH MILITANT FOR SANITATION IN HURDSFIELD."

IN THE LANCET of March 17th, 1900, page 817, some account was given of the very insanitary conditions which were allowed to prevail in Hurdsfield, a suburb of Macclesfield. Upwards of 700 houses in Hurdsfield were unsewered; streets were unpaved; a drain carrying sewage was in part of its course uncovered and at times most offensive; road-gutters did not communicate with any drains but were fitted with dummy traps and grids; and the "ashpit system" was in vogue, the contents being apparently emptied into the street and then removed. This objectionable state of matters, of course, could not exist except by the apathy of the Macclesfield Corporation. Hurdsfield, in fact, seems to be a working-class district—no alderman lives there; one of the residents is a councillor, but he is a recent importation. Notwithstanding the mediocrity of its position from the social point of view Hurdsfield has in its vicar—the Rev. William Laycock—a fearless champion of sanitation, possessed of a fluent pen. This gentleman is as zealous for the bodily health as for the soul's health of his congregation, and in the April number of the *Hurdsfield Church Messenger* he justifies his attitude by a reference to the new Bishop of London who has said that God intended a bishop to look after sanitation. He has been unceasing in his efforts to obtain better sanitary conditions for the district, and when his representations had little effect on the Macclesfield Corporation he appealed to "higher authorities," one of which was, of course, the Local Government Board. Some of the results in the way of making sewer connexions, &c., are duly chronicled in the January number of the *Messenger*. A portion of Mr. Laycock's subsequent correspondence with the Local Government Board is published in the *Macclesfield Courier and Herald*, which also mentions that the supineness of the Health Committee is being criticised by another resident of undoubted position. Clergymen of Mr. Laycock's energy and public spirit are aids to progress everywhere and their influence is especially beneficial in communities where there is no leisured class interested in local improvements.

RECREATIVE READING.

To the Editors of THE LANCET.

SIRS,—Will one of your reviewers tell me the names of a dozen good novels? Save for a few classics I have read no fiction. I have never had time to do so till lately. Will you guide me in my choice and oblige,

Yours faithfully,
RETIRED.

"*" How would our correspondent answer anyone who asked him for the names of 12 nice things to eat? Fish, flesh, fowl, and fruit would crowd on his memory and all the cunning compositions of cook and confectioner. Then he might decline to answer. We regret to say that that is what we must do.—ED. L.

"PLACE OF RESIDENCE FOR A RETIRED SURGEON."

To the Editors of THE LANCET.

SIRS,—I am able to inform your correspondent "P. P." in THE LANCET of April 13th, p. 1118, that I have not found West Bournemouth or Branksome at any time very hot or relaxing, and I had previously to becoming a resident visited here several times, and from experience I should consider the western part of Bournemouth and its neighbourhood suitable for an eastern counties man,

I am, Sirs, yours faithfully,
April 14th, 1901. F. H. A.

THE TREATMENT OF THREAD-WORMS.

To the Editors of THE LANCET.

SIRS,—Will some of your readers kindly suggest a treatment for the following case? A female child, aged seven years, has suffered from "thread-worms" for the last four years. All ordinary treatment (such as injections of quassia, salt, &c., with purgatives internally) has failed to cure the complaint. I am, Sirs, yours faithfully,
April 16th, 1901. WORMS.

BLACKWATER FEVER.

IN an article on Blackwater Fever published in the April number of the *Scottish Medical and Surgical Journal* Mr. S. W. Thompstone and Dr. R. A. Bennett state that as far as they can judge from the statistics of Southern Nigeria there is a well-marked connexion between the particular season of the year and the number of cases of that disease recorded. Curiously enough, this connexion is the exact reverse of that which obtains in the German Cameroon Colony, although the seasons are practically the same in both tracts of country. F. Plehn, in his monograph on the diseases of the Cameroons, distinctly states that from the beginning of the rains in March to their termination in November the

number of cases of blackwater fever steadily grows, to fall suddenly at the onset of the dry season. In Southern Nigeria, on the other hand, the disease is much more common during the dry season than during the rains. It is more frequently met with now than formerly and it varies very much in severity in different years. In one season a dozen cases will occur consecutively without a death, and in another the death-rate may be as high as 20 or 40 per cent. of the cases treated. In the great majority of cases there is no history which throws any light on the predisposing cause, though exposure in a certain number of cases appears to have been the exciting cause of the attack. No case has been recorded among natives in Southern Nigeria since the institution of Government statistics.

"THE SALT CURE."

To the Editors of THE LANCET.

SIRS,—In reply to the letter of "S. W." in THE LANCET of April 13th, p. 1117, in which he refers to an article in the *Contemporary Review* for March upon the treatment therein called "the salt cure," I should like to call his attention to the fact that the method of Dr. Jules Chéron was introduced to the notice of the medical profession in this country by Mr. Ralph H. Browne at the meeting of the British Medical Association at Clifton in 1894. About the same time Mr. Browne issued a *brochure* on the subject which was published by Messrs. Churchill, and which is, no doubt, still obtainable. The treatment therein described is undoubtedly of great value in many cases of neurasthenia and hysteria.

I am, Sirs, yours faithfully,

CHAS. LLOYD TUCKEY, M.D. Aberd.

Park-street, W., April 16th, 1901.

"UNPLEASANT ENTERPRISE."

To the Editors of THE LANCET.

SIRS,—My head office have directed my attention to the observation under the heading of "Notes," contained on page 1118 in THE LANCET of April 13th. After reading your remarks I have come to the conclusion that to a large extent your criticism is a just one, but I am bound to add that I had not the slightest intention of doing anything that would cast a reflection upon the parties referred to in the newspaper extract, and further, I do not think that I have done anything to extend the knowledge of the incident. My desire was simply to tell those who followed similar occupations that any financial risk involved could be covered by insurance, without recognising that the action in question was not raised in a civil court. I will also add that the issue of the letter and newspaper cutting was done on my own responsibility entirely and without the authority or even knowledge of my head office, who, I am bound to add, disapprove my action. I beg you will insert this communication in your next issue.

I am, Sirs, yours faithfully,

A. R. ALDRED,

District Manager, Law Accident Insurance Society.

Leeds, April 16th, 1901.

THE EARLIEST PORTRAIT OF HER LATE MAJESTY QUEEN VICTORIA.

THERE are few households which do not possess some portrait of Queen Victoria. The usual likeness represents her in middle or advanced life, but a miniature showing her as she was when a very little girl is now being reproduced by Messrs. Waterlow and Sons, Limited, for Mr. V. C. Mallan of 106, Edgware-road, London. The miniature is tasteful and pleasing in appearance; it includes the face and upper part of the bust and is mounted in a black circular frame rather less than four inches in diameter. It is the earliest portrait and was formerly in the possession of the Duchess of Kent. In verification of its authenticity it is accompanied by copies of letters written on behalf both of the Queen herself and of the present King when Prince of Wales. On the reverse of the miniature there is a facsimile of a lock of the Queen's hair.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—I should be grateful if any of your readers could let me know of a home where a young man who is suffering from diabetes mellitus could be taken in and could receive medical treatment. He can pay a small weekly pension. I am, Sirs, yours faithfully,

New Seaham, Durham, April 14th, 1901. E. J. HOWLEY.

W. G. asks us what is the average cost of residence at Davos Platz for a case of pulmonary tuberculosis? The cost to a man to whom every shilling is of consequence would be very different from that to a man of ampler means. The ordinary patient at an English hotel will spend during his winter residence 20 francs a day, rather more than less, and the sum will include payment for milk, wine, and other obvious extras. For patients of smaller means there are cheap English pensions where the cost would amount to six or seven francs per day, while residence at a cheap Swiss pension would cost a little less than this. Our correspondent may like to know that there is at Davos Platz an invalid home open for ladies and gentlemen of small means where the payment of four to four and a half francs per day covers medical attendance and nursing.

HOSPITAL PRACTICE IN VIENNA.

To the Editors of THE LANCET.

SIRS,—I should be glad to know if any of your readers could inform me as to the facilities for hospital practice at Vienna. I want to do some clinical work in medicine and surgery for an examination. I should also feel much obliged for any information with regard to the "coaching" in these subjects to be had there by someone who speaks English. I am, Sirs, yours faithfully,

April 17th, 1901. M. D. H.

MR. E. J. REID of 11, Dunedin House, Basinghall-street, London, E.C., has forwarded us a pamphlet relating to all that is known of vasogen and vasogen preparations. The pamphlet has been arranged alphabetically for ready reference by Dr. M. Gallas of Hamburg. The vasogen compounds are of undoubted importance in treatment by drugs and a number of interesting cases of their application are recorded in this pamphlet.

Alienist.—A consulting physician expects to take a guinea as a minimum fee when asked by a brother practitioner to see a case. "Alienist's" proper fee seems to us to depend upon the duty required, the distance of the patient from his house, and the number of visits—points upon all of which we are in ignorance. We cannot suggest with the information before us what charges should be made.

T. J. J.—Professor Clifford Allbutt's article on "Opium Poisoning" in vol. ii. of "Allbutt's System of Medicine" will be found to give a very good account of the habit. There is no separate book so far as we know, but references are given at the end of Professor Clifford Allbutt's article to various papers which have appeared dealing with the subject.

Angina.—In the first position described by our correspondent B's attitude is quite correct. In the second we think he should himself have informed A that it was his intention to take over the treatment of the child on the understanding that the case had been given up by A. This would have given A a proper opportunity of explaining matters.

Eager.—The condition is one to which far too much importance is attached. Our correspondent should consult his family medical man.

G.P. is advised not to administer anæsthetics for an unregistered dentist.

Query.—The man is a complete impostor.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 18th, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 12	29·73	NNW	0·34	84	51	40	42	45	Overcast
,, 13	29·91	S.W.	0·01	57	50	39	40	44	Cloudy
,, 14	29·73	S.W.	0·17	80	56	41	45	46	Cloudy
,, 15	29·44	N.W.	0·11	98	52	45	44	45	Cloudy
,, 16	29·43	N.W.	0·03	88	48	39	42	45	Cloudy
,, 17	30·15	NNE	0·08	93	56	38	40	44	Fine
,, 18	30·26	S.W.	...	87	58	43	43	48	Overcast

During the week marked copies of the following newspapers have been received:—*Macclesfield Courier, Hampshire Advertiser, Blackburn Standard, Birmingham News, Glasgow News, Dundee Advertiser, Sheffield Daily Telegraph, Somerset Gazette, Middlesex Advertiser, Bridge of Allan Reporter, Wigan Examiner, Express (Cardiff), Western Mercury (Plymouth), Leeds Mercury, South Wales News, Lincolnshire Times, Dunfermline Journal, Oxford Journal, Essex Herald, East Anglian Times, Architect, Times of India, Pioneer Mail, Builder, Scotsman, Liverpool Daily Post, Citizen, Yorkshire Post, Bristol Mercury, Keble's Ramsgate Gazette, Cambria Daily Leader, Bath Weekly Argus, Malden Express, Lancaster Guardian, Rugby Advertiser, Brisbane Courier, Town and Country Journal (Sydney), City Press, Mining Journal, Local Government Chronicle, Hertfordshire Mercury, Reading Mercury, Surrey Advertiser, Colchester Mercury, Blackpool Times, Kentish Observer, Stratford Express, South African News, Derbyshire Courier, Derbyshire Times, Staffordshire Sentinel, Shifnal Advertiser, Folkestone Chronicle, Highland News (Inverness), Tooting Herald, Review of the Week, Consett Guardian, Shrewsbury Chronicle, &c., &c.*

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.),

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Paper: Mr. C. S. Tomes and Mr. W. H. Dolamore: Some Observations on the Movements of the Mandible. Communications:—Mr. F. J. Bennett: A Case of Deafness dependent on Dental Disease.—Mr. R. Barrett: A Case of Underhung Bite. Casual Communication:—Mr. J. G. Turner.

MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-quare, W.).—9 P.M. Mr. A. J. Barker: Case of Extensive Enterectomy.—Mr. Mansell Moullin: Case of Intestinal Anastomosis for Prolonged Atony of the Colon.

TUESDAY (23rd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. W. G. Spencer: Arterial Hæmorrhage from the Ear and its Control by Ligature of the Common Carotid Artery.—Dr. A. G. Phear: A Case of Acute Leukæmia.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Paper:—Mr. E. M. Holmes: Recent Additions to the Museum.

WEDNESDAY (24th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Paper:—Mr. C. Worth: The Modern Treatment of Convergent Squint.

THURSDAY (25th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Informal Exhibition of Cases. 5 P.M. Meeting.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Discussion on the Clinical and Pathological Consequences of Retroversion of the Uterus, their Preventive, Palliative, and Radical Treatment. Dr. W. Alexander, Mr. J. Taylor, Mr. B. Jessett, Dr. Elder, Dr. H. Smith, Mr. W. D. Spanton, and Mr. M. Lawrie will take part in the discussion.

FRIDAY (26th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Exhibition of Clinical Cases, followed by Discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Galloway: Consultation. (Skin.)

TUESDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Sir Wm. Broadbent: Consultation. (Medical.)

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Dr. A. Macfadyen: Cellular Physiology, with Special Reference to Enzymes and Ferments.

WEDNESDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. R. Harrison: Consultation. (Surgical.)

THURSDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Consultation. (Surgical.)

ROYAL BRITISH NURSES' ASSOCIATION (10, Orchard-street, W.).—5.30 P.M. Lecture:—Mr. R. Greene: Ancient Medicine and Ancient Medical Men.

FRIDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. StClair Thomson: Consultation. (Throat.)

ROYAL INSTITUTION OF GREAT BRITAIN.—9 P.M. Dr. Hans Gadow: Colour in the Amphibia.

SATURDAY (27th).—ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Mr. J. Y. Buchanan: Climate, its Causes and its Effects.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

Communications, Letters, &c., have been received from—

A.—Mr. R. Ackrill, Harrogate; Dr. C. H. Allen, Nottingham; Messrs. Ayrton and Saunders, Liverpool; Association for Pure Vaccine Lymph, Lond.; Messrs. Allen and Hanburys, Lond.; A. J. R. O.

B.—Dr. Bygott, Birmingham; Mr. R. Blackett, Lond.; Messrs. Bale and Danielsson, Lond.; Mr. F. Paul Bush, Clifton; Messrs. P. B. Burgoyne and Co., Lond.; Bayer, Ltd., Lond.; Miss A. Belcher, Wednesbury; Barnwood House Hospital, Gloucester, Medical Superintendent of; Dr. R. Browne, Lond.; Mr. T. V. Bell, Enniskillen; Messrs. C. Baker and Sons, Lond.; Bristol General Hospital and Dispensary, Secretary of; Birkbeck Bank, Lond., Manager of; Dr. C. Bason, Lond.; Birmingham University, Dean of.

C.—Mr. J. Carson, Theydon Bois; Carnos, Ltd., Great Grimsby; Cortland Wagon Co., Lond.; Messrs. Cassell and Co., Lond.; City of Sheffield, Town Clerk of; Mr. T. J. Croke, Hull; Consultative Medical and Surgical Institution, Birmingham; Cantab, Lond.; Dr. E. O. Croft, Leeds; Mr. F. V. Chalmers, Snaresbrook; Cambridge University, Registry of; Chesterfield, &c., Hospital and Dispensary, Secretary of; Mr. J. Colam, Lond.; Mr. A. H. Cheatle, Lond.

D.—Mr. F. Davidson, Lond.; Dr. Deanesley, Wolverhampton; Dr. A. Davidson, Dorchester; Messrs. J. Defries and Sons, Lond.; Messrs. Dunville and Co., Belfast; Dr. J. P. Dee, Walton-on-the Naze; Dr. W. Davis, West Clarkfield, U.S.A.

E.—Dr. G. L. Eastes, Lond.; Eager, Newcastle-on-Tyne; Dr. Elkind, Lond.

F.—Mr. J. M. Forster, Chathill; Messrs. Fletcher, Russell and Co., Warrington; Mr. R. Freeman, Lond.; F. R. G.

G.—Dr. W. H. Gregory, Beverley; Mr. J. Gannon, Lond.; Mr. R. F. Grün, Brighton; Messrs. Greenham and Co., Shanklin; Dr. H. Laing Gordon, Lond.; G. P., Lond.; General Medical Council Office, Lond., Registrar of.

H.—Mr. Whistler Hanson, Lond.; Dr. L. K. Herschel, Bordighera; Howard Association, Secretary of; Mrs. H. Harvey, Exeter; H. T.; Haydock Urban District, Medical Officer of Health of; Dr. F. Hewitt, Lond.; Dr. W. Hunter, Lond.; Mr. A. Helbig, Lond.; Mr. J. Hart, Lond.; Hon. Sydney Holland, Lond.; Rev. H. Hawkins, Lond.; Mr. Hutton Haylor, Lond.; Mr. F. R. Humphreys, Lond.

I.—Dr. W. A. Illingworth, Leamington Spa; Ingham Infirmary, South Shields, Secretary of.

J.—Dr. J. D. Jenkins, Pentre; Dr. T. J. Jamieson, Mountain, Ont.; Miss Frances Johnson, Lond.

K.—Mr. J. E. S. King, Lond.; Mr. W. B. Kerr, Newcastle-on-Tyne; Mr. H. Kenwood, Lond.; Messrs. R. A. Knight and Co., Lond.

L.—Liverpool Stanley Hospital, Secretary of; Leeds General Infirmary, Secretary of; Messrs. Sampson Low, Marston, and Co., Lond.

M.—Messrs. Masson et Cie, Paris; Maltine Manufacturing Co., Lond.; *Medical Echo*, Budapest, Editor of; *Medical Review*, Lond.; Manchester Royal Infirmary, Secretary of; Macclesfield, Medical Officer of Health of; Messrs. E. Marlborough and Co., Lond.

N.—Mr. J. O. Neumann, Lond.; Dr. W. Newman, Stamford; Mr. F. C. Needes, Lond.; Mr. H. Needes, Lond.

O.—Sir Francis Osborne, Lond.

P.—Mr. Y. J. Pentland, Edinburgh; Messrs. Parke, Davis, and Co.; Lond.; Messrs. Philip, Son, and Nephew, Liverpool; Prince of Wales's Hospital Fund for London, Hon. Secretaries of; Mr. F. B. Potter, Lond.; Mr. W. Parson, Godalming; Messrs. Peacock and Hadley, Lond.; Dr. L. A. Parry, Brighton.

R.—Dr. Arthur Roberts, Harrogate; Mr. E. J. Reid, Lond.; Messrs. Robertson and Scott, Edinburgh; Royal Cornwall Infirmary, Truro, Secretary of; Messrs. J. Robertson and Son, Dundee; "Regions Beyond" Missionary Union, Lond.; Royal Surrey County Hospital, Guildford; Registered Nurses' Society, Lond., Secretary of; Dr. Archdale Reid, Southsea.

S.—Mr. R. Smith, Glasgow; Dr. Arbour Stephens, Swansea; Dr. T. Wilson Smith, Bath; Messrs. W. H. Smith and Son, Manchester; Sanitas Co., Lond.; Messrs. Street and Co., Lond.; St. Mary's Hospital, Manchester; Southport Infirmary, Secretary of; Dr. J. Santelli, Montreuil, L'Argillé, France; South Shields Corporation, Secretary of; Dr. Salzbergen, Landshut; Messrs. W. H. Smith and Son, Liverpool; Messrs. Squire and Sons, Lond.; Scholastic, Clerical, &c., Association, Lond.; Messrs. H. C. Sca'es and Co., Lond.

T.—Dr. F. W. Tunnicliffe, Lond.; Mr. C. Truan, Chacewater; Dr. Bell Taylor, Nottingham; Mrs. H. B. Tarry, Lond.; Dr. A. Turnbull, Lond.; Mr. P. Turner, Lond.

U.—University College, Bristol, Secretary of; Uralite Co., Lond.

V.—Mr. J. W. Vickers, Lond.

W.—Dr. J. R. Whitaker, Edinburgh; Wrexham Infirmary, Secretary of; Willenhall Urban District Council, Medical Officer of Health of; Wills, Ltd., Lond.; West Ham Hospital, Stratford, Secretary of; Messrs. C. H. and J. W. Willmott, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Miss Atkinson, Shanklin; Messrs. Armour and Co., Lond.; A. B., Breckenhurst; A. H. P.; A. W. H. L.; A. J. M.; A. A. M.; A. W. B.; A. A.

B.—Mr. J. H. Booth, Chesterfield; Lieutenant-Colonel P. H. Benson, Mysore; Mr. L. A. Bidwell, Lond.; Bedford County Hospital, Secretary of; Mrs. B., Lond.; Mr. J. M. Bennetts, Truro; Birmingham Free Hospital for Children, Secretary of; Borough of Richmond, Clerk of; B. J.; Mr. C. B. Baxter, Shrewsbury; Dr. M. Benson, Wigan.

C.—Mr. J. M. Carvell, Catford; Mr. J. M. Chambers, Llandudno; Cardiff Infirmary, Secretary of; Messrs. Samson Clark and Co., Lond.; Crooksbury Sanatorium, Secretary of; C. W. B.; Capsuloid Co., Lond.

D.—Mr. W. W. Davies, Bristol; Messrs. Darton, Gibbs, and Co., Oldbury; Mr. E. C. Dean, Bridgetown, Australia; Herren G. L. Daube and Co., Frankfurt; Dover Hospital, Secretary of; Mr. T. Dixon, Lond.; D. W. P.; D. W.

E.—Dr. W. Ewart, Lond.; E. B. H.

F.—Messrs. Ferris and Co., Bristol; Mr. G. Fleming, Combe Martin; F. W. E. H.

G.—Mr. J. Gray, Edinburgh; Messrs. G. Gale and Sons, Birmingham; G. V.; Mr. H. E. Girdlestone, Bournemouth; Mr. L. D. Gadre, Nagpur; Mr. H. L. Gill, Halifax.

H.—Mr. J. J. Harding, Bulwell; Hollis, Hall, Norwich; Miss Halford, Lond.; H. J.; Dr. W. T. Harkness, Hetton-le-Hole; Hull Corporation, Treasurer of; H. C. W.; H. W. C.

I.—*Irish Homestead*, Dublin, Editor of.

J.—Jessop Hospital for Women, Sheffield, Secretary of; J. H. B.; Messrs. Jewsbury and Brown, Manchester; J. R. H. O.; J. C. J.; Mr. S. James, Gwaunesgurwen; Mrs. James, Lond.; Mr. A. Jolly, Chorley; J. R. P.; J. M. F.; J. M. C.

K.—Miss Kennedy, Ballymoney.

L.—Dr. P. W. Latham, Cambridge; Mr. K. Lal, Aminabad, India; Mr. H. K. Lewis, Lond.; Mr. L. J. Levi, Lond.; Mr. W. H. Legat, Bolton; L. R.; Messrs. Lee and Nightingale, Liverpool.

M.—Mr. W. McCrea, Balfron; Mr. J. McMurtrie, Glasgow; Metropolitan Borough of Greenwich, Accountant of; Mr. E. P. Marett, Avranche, Jersey; Dr. R. Metcalfe, Leyburn; M. H. H.; M. D., Liverpool; Dr. McC.; Miss Martin, Exmouth; Mr. R. Moore, Launceston; M. R. W.; Messrs. Matthews Bros., Lond.; M. D., L.R.C.P., Ealing; M. S. D.; Mr. Macbeth, Liverpool.

N.—Messrs. Neyroud and Son, Lond.; Dr. R. Niven, Lond.

O.—Omega, Lond.

P.—Mr. C. E. Priestly, Lond.; Messrs. C. Pool and Co., Lond.; Dr. W. H. Price, Worsborough Bridge; Mr. J. Pond, Norwich; Mrs. M. R. Peters, Lond.; P. P.; Dr. E. J. Parry, Pontycymmer; P. S. W.

R.—Mr. F. G. A. Rogers, Cardiff; Royal Isle of Wight Infirmary, Ryde; R. W. J.; R. M.; R. F. S.; Mr. H. Rainbird, Saxilby; Mr. R. Redpath, Newcastle-on-Tyne; Dr. T. H. Rockwell, Lond.; Mr. R. Rogers, Lond.; R. M. H. W., R. C. R.; R. C.

S.—Mr. B. W. Sanders, Kingsland; Mr. H. Smith, Farningham; Mr. A. Scarborough, Halifax; Mr. H. W. Stanley, Lond.; Dr. S. R. Schofield, Lond.; Statim, Neath; Mr. A. Smyth, Tonbridge; Dr. G. A. Sutherland, Lond.; St. Bartholomew's Hospital, Rochester, Secretary of.

T.—Dr. R. Thurnam, Blagdon; Mr. J. Thin, Edinburgh; Dr. T.; Torbay Hospital, Torquay, Secretary of.

V.—Vinolia Co., Lond.

W.—Mr. L. Whitaker, Leeds; Mr. G. E. Wherry, Cambridge; Messrs. Wilcox and Co., Lond.; Messrs. Wilson and Valdespino, Lond.; Miss Woodward, Lond.; Whitehaven Infirmary, Matron of; W. H. G.; W. S. R.; Messrs. J. Wright and Co., Bristol; Messrs. H. Wilson and Son, Lond.; W. J. R.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France,—J. ASTIER, 8, Rue Traversière, Asnières, Paris.